Operation Manual of The Ducted Split Type Air-Conditioning Units

FSL-1100B-H-3F
FSOL-1100B-3F

Please read this manual carefully before operation and installation

Preface

FISHER ducted air-conditioning units are elaborately designed and produced with high quality, reliability and adaptability.

Please read this instruction thoroughly before operation and maintenance.

The installation should be carried out by the qualified service technicians.

FISHER will not be responsible for the personal injury or property damage resulting from improper installation and adjustment, unnecessary maintenance and those do not follow the instructions in this manual.

The scope of guarantee must accord with the following items:

The first start-up should be carried out by qualified service technicians appointed by the service center of FISHER.

The components of air-conditioning units should only be provided by FISHER Company. The specified time and frequency of the operation and maintenance items in this manual should be strictly executed.

Any violation of the precedent items will lead to the invalidation of guarantee.

All of the figures and messages are for reference only. Since The FISHER has a policy of continuous product improvement, he reserves the right to change design and specifications of the products at any time without notice.

R410A(R32/125: 50/50)

GWP：1900

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1、Safety precautions

1.1 Safety notice

Before using the appliance, read this manual thoroughly and operate under its direction.

“WARNING” and “ATTENTION” have the following meanings in these instructions:

△WARNING This mark indicates procedures, which if improperly performed, might lead to the death or serious injury of the users.

△ATTENTION This mark indicates procedures, which if improperly performed, might possibly result in personal injury to the user, or damage to property.

△WARNING

- Do not use or place combustible and explosive gas or liquid near the air conditioner.
- To optimize the life of the appliance, do not install the air-conditioning unit by yourself.
- Do stop operation and turn off the power supply immediately in the event of a malfunction (burning smell, etc.).
- Don’t remove the fan guard and not insert fingers or objects into the outlet ports of the indoor and outdoor unit.
- Do not check or fix the air-conditioning unit while it is running.
- Do not pour water into the air-conditioning unit and not operate it with a wet hand.
- The air-conditioning unit is not equipped with a device to suck fresh air from the outdoors, so when you are using gas or petrol in the same room, or you feel the room air is dirty, please open the door or window to exchange the air, but this can affect the adjustment of air conditioning.

△ATTENTION

- Ensure the power supply correspond to the nameplate and check the security of the power source before installation.
- Make sure that the wires, pipes and drain hose are properly connected before operation to avoid a fire or electric shock.
- Don’t let children operate the ducted air-conditioning unit.
- Turn off the power supply whenever cleaning the air-conditioning unit or changing the air filter.
- Switch off power source when the units will not be operated for a long period.
- Do not step or place objects on the air-conditioning unit.
- The appliance shall not be installed in the laundry

1.2 Power supply demand

1) Provided sufficient capacity of power supply and the cross area of electrical wires.
2) Confirm the reliable earth connection, and the earth wire should be connected to special device of the building. Never connect the earth wire to the gas pipe, water pipe, the earth wires of telephone and lighting rod.
3) Make sure that the wiring is done by the qualified technicians according to the relevant regulations.
4) In fixed circuit, there must be electricity leakage protection switch of enough power capacity and air switch with enough space.
5) An all-pole disconnection device which has at least 3mm separation distance in all pole and a residual current device(RCD)with the rating of above 10mA shall be incorporated in the fixed wiring according to the national rule

6) The appliance shall be installed in accordance with national wiring regulations
7) The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.

2、Displaying Part



Fig.2.1 Outline of wired controller

2.1 LCD Display of Wired Controller



Fig.2.2 LCD display

2.2 Instruction to LCD Display

No.	Description	Instruction to Displaying Contents
1	Swing	Swing function
2	Air	Air exchange function
3	Sleep	Sleeping states
4	Running	Each kind of running mode of indoor unit (auto mode)

	mode	
5	Cooling	Cooling mode
6	Dry	Dry mode
7	Fan	Fan
8	Heating	Heating mode
9	Defrost	Defrosting state
10	Gate-control card	Gate control
11	Lock	Lock state
12	Shield	Shielding state (buttons, temperature, on/off, mode or save is shielded by long-distance monitoring
13	Turbo	Turbo function state
14	Memory	Memory state (Indoor unit resumes original setting state after power failure and then power recovery)
15	Twinkle	Flicking when unit is on without operation of buttons
16	Save	Energy-saving state
17	Temperature	Ambient/setting temperature value
18	E-Heater	Mark that E-heater is allowed to turned on
19	Blow	Blow mark
20	Timer	Timer-displayed location
21	Quiet	Quiet state(two types: quiet and auto quiet)
There is not Master and CO_2 functions for E series ducted type unit and A2 ducted type and cassette type units		

Table 2.1

3、Buttons

3.1 Silk Screen of Buttons



Fig. 3.1 Silk screen of buttons

3.2 Instruction to Function of Buttons

No.	Description	Function of Button
1	Enter/cancel	（1）Function selection and canceling; （2）Press it for 5s to enquiry the outdoor ambient temperature.
2	▲	（1）Running temperature setting of indoor unit, range :16～30℃ （2）Timer setting, range:0.5-24hr （3）Switchover between quiet/auto quiet
6	▼	
3	Fan	Setting of high/middle/low/auto fan speed
4	Mode	Setting of cooling/heating/fan/dry mode of indoor unit
5	Function	Switchover among the functions of air,/sleep/turbo/save/e-heater/blow /quiet
7	Timer	Timer setting
8	On/off	Turn on/off indoor unit
4 Mode and 2 ▲	Memory function	Press them for 5s under off state of the unit to enter/cancel memory function (If memory is set, indoor unit after power failure and then power recovery will resume original setting state .If not, indoor unit is defaulted to be off after power recovery. Memory function is defaulted to be off before outgoing.)

2 ▲ and 6 ▼	Lock	Upon startup of the unit without malfunction or under off state of the unit, press them at the same time for 5s in to lock state. In this case, any other buttons won't respond the press. Repress them for 5s to quit lock state.
4 Mode and 5 Function	Enquiry and setting of address of wired controller	Press them for 5s under unit off at the same time to set address.

Table 3.1

4、Installation of Wired Controller and Project Debugging

4.1 Installation of Wired Controller

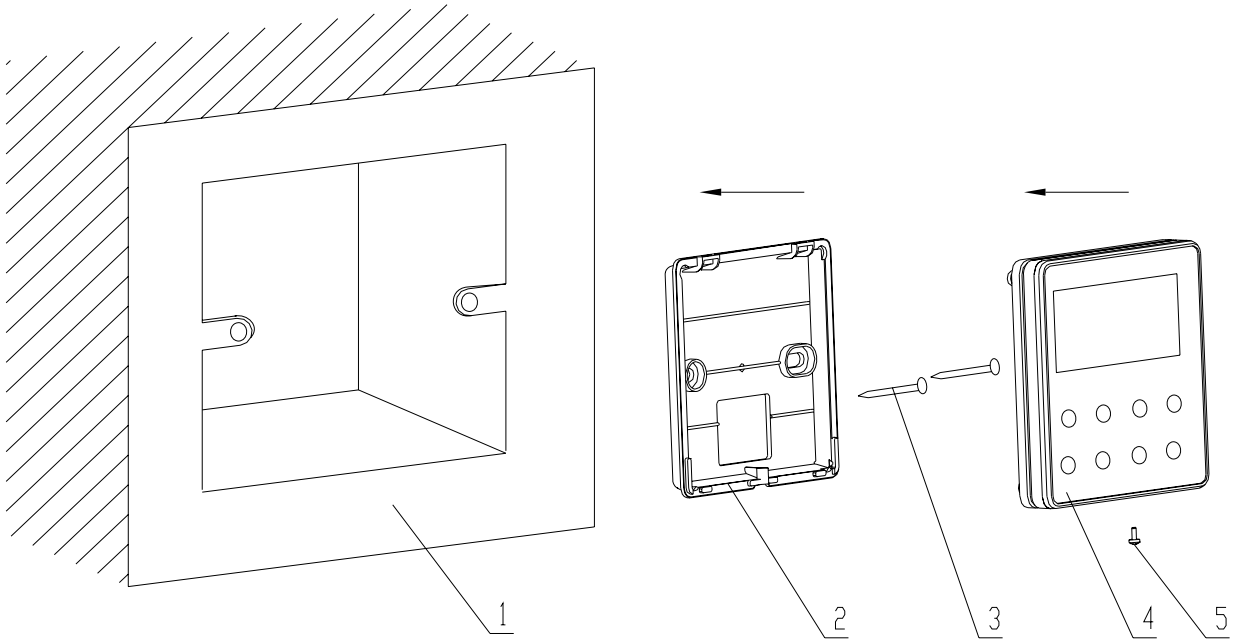


Fig.4.1: Sketch for Installation of Wired Controller

No.	1	2	3	4	5
Description	Socket's base box installed in the wall	Soleplate of controller	Screw M4X25	Front panel of controller	Screw ST2.2X6.5

Fig.4.1: Sketch for Installation of Wired Controller. Pay attention to the following items during installation of wired controller:

1. Cut off power supply of heavy-current wire embedded in mounting hole in the wall before installation. It is prohibited to perform the whole procedure with electricity.

2. Pull out 4-core twisted pair line in mounting hole and then make it through the rectangle hole at the back of controller's soleplate.

3. Joint the controller's soleplate on wall face and then fix it in mounting hole with screws M4X25.

4. Insert the 4-core twisted pair through rectangle hole into controller's slot and buckle the front panel and soleplate of controller together.

5. At last, fix the controller's front panel and soleplate with screws ST2.2X6.5.

Caution:

During connection of wirings, pay special attention to the following items to avoid interference of electromagnetism to unit and even failure of it.

1. To ensure normal communication of the unit, signal line and wiring (communication) of wired controller should separate from power cord and indoor/outdoor connection lines. The distance between

them should be kept 20cm in min.

2. If the unit is installed at the place where there is interference of electromagnetism, signal line and wiring (communication) of wired controller must be shielding twisted pair lines.

5、Instruction to Operation

5.1 On/Off

Press **On/Off** button to turn on the unit.

Repress this button to turn off the unit.

Note: The state shown in Fig.5.1 indicates off state of the unit after energization. The state shown in Fig.5.2 indicates on state of the unit after energization.



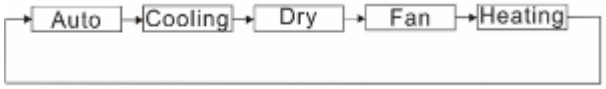
Fig.5.1 Off state of the unit



Fig.5.2 On state of the unit

5.2 Mode Setting

Under on state of the unit, press **Mode** button to switch the operation modes as the following sequence:





Press ▲ or ▼ button for increase or decrease of setting temperature under on state of the unit. If

5.3 Temperature Setting

Press ▲ or ▼ button for increase or decrease of setting temperature under on state of the unit. If press either of them continuously, temperature will be increased or decreased by 1℃ every 0.5s.

In Cooling, Dry, Fan and Heating mode, temperature setting range is 16℃～30℃。

In Auto mode, the setting temperature is un-adjustable.

As shown in Fig.5.3



Fig 5.3

5.4 Fan Speed Setting *

Under on/off state of the unit, press **Fan** button, fan speed of indoor unit will change as below: As shown in Fig.5.4

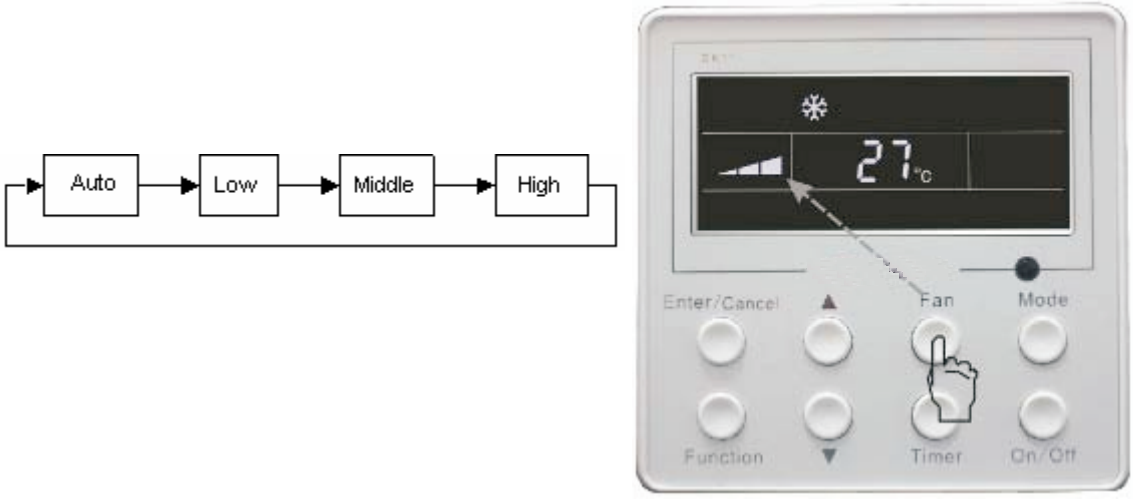


Fig.5.4

(Indoor unit can only run at high fan speed mode and fan speed can't be modified by wired controller.)

5.5 Swing Control Function *

Under on state of unit, press **Function** button till the unit enters swing control function and then press "**Enter/cancel** " button to turn on turbo control function.

During swing function, press **Function** button till the unit enters swing control function and then press **Enter/cancel** button to cancel swing control function.

Swing control function setting is shown in Fig 5.5

There is no this function for this unit.

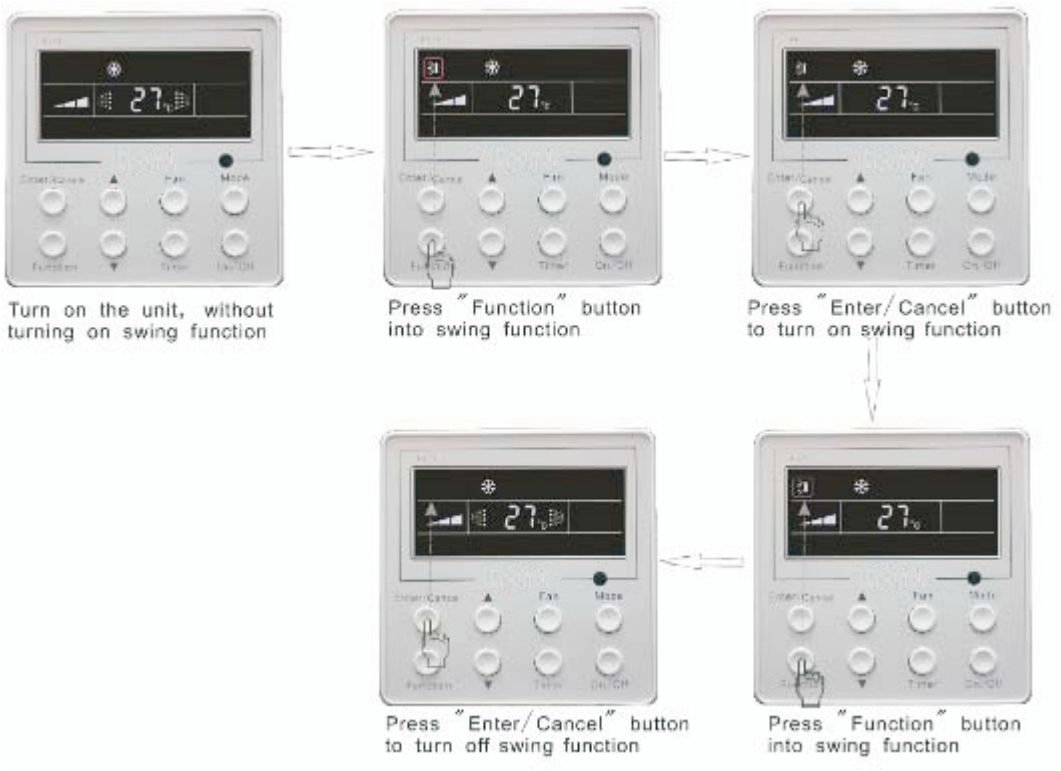


Fig.5.5

5.6 Timer Setting

Under on state of the unit, press **Timer** button to set timer off of the unit. Under off state of the unit, press **Timer** button to set timer on of the unit in the same way.

Timer on setting: Under off state of the unit without timer setting, if **Timer** button is pressed, LCD will display **xx. Hour**, **ON** blinking. In this case, press▲ or ▼ button to adjust timer on and then press **Timer** to confirm. If **Mode** button **is pressed** before pressing **Timer** button to confirm, timer mode will be switched to timer off setting mode. In this case, LCD displays **xx. Hour**, **OFF** blinking. In this case, press▲ or ▼ button to adjust timer off and then press **Timer** to confirm. When LCD displays **xx. Hour On Off**, **xx. Hour** means time of timer on, but time of timer off won't be displayed.

Timer off setting: Under on state of the unit without timer setting, if **Timer** button is pressed, LCD will display **xx. Hour**, **OFF** blinking. In this case, press▲ or ▼ button to adjust timer on and then press **Timer** to confirm. If **Mode** button **is pressed** before pressing **Timer** button to confirm, timer mode will be switched to timer on setting mode. In this case, LCD displays **xx. Hour**, **ON** blinking. In this case, press▲ or ▼ button to adjust timer on and then press **Timer** button to confirm. When LCD displays **xx. Hour On Off**, **xx. Hour** means time of timer off, but time of timer on won't be displayed.

Cancel timer: After setting of timer, if **Timer** button is pressed, LCD won't display **xx. Hour** so that timer setting is canceled.

Timer off setting under on state of the unit is shown as Fig.5.6

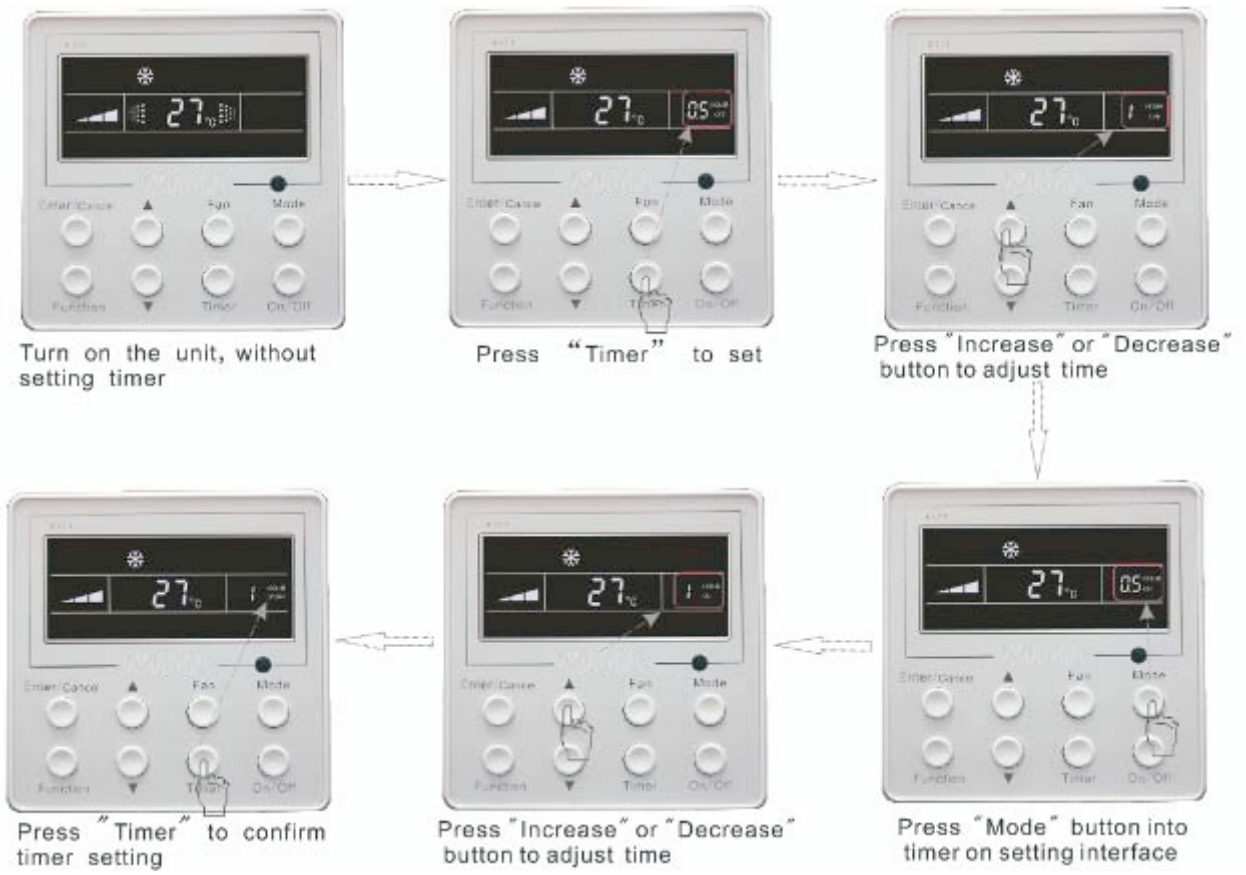


Fig.5.6 Timer setting under on state of the unit

Timer range: 0.5-24hr. Every press of▲ or ▼ button will make setting time increased or decreased by 0.5hr.If press either of them continuously, setting time will automatically increase/ decrease by 0.5hr every 0.5s.

Note:

1. If both timer on and timer off are set in unit on interface, the wired controller only display time of time off after confirmation of timer. If both of them are set in unit off interface, only time of timer on is displayed.

2. Timer on in unit on interface is timed from the time of unit off and timer off in unit off interface is timed from the time of unit on.

5.7 Air Exchange Setting*

Turn on air function: Under on state of the unit, press **Function** button into this function setting (Air mark blinks).AIR 1 displayed at the ambient temperature-displayed location (888) is defaulted (the last type of AIR will be displayed after adjustment).Press ▲ or ▼ button to adjust air type. Press **Enter/Cancel** button to turn on/off air function. After turning on this function, the air mark shows.

There are 10 types of AIR, but only 1-2 types are for remote control. Refer to the following details:

1——The unit continuously runs for 60min, and fresh air valve runs for 6 min.

2——The unit continuously runs for 60min, and fresh air valve runs for 12 min.

3——The unit continuously runs for 60min, and fresh air valve runs for 18 min.

4——The unit continuously runs for 60min, and fresh air valve runs for 2 4 min.

5——The unit continuously runs for 60min, and fresh air valve runs for 30 min.

6——The unit continuously runs for 60min, and fresh air valve runs for 36 min.

7——The unit continuously runs for 60min, and fresh air valve runs for 42 min.

8——The unit continuously runs for 60min, and fresh air valve runs for 48 min.

9——The unit continuously runs for 60min, and fresh air valve runs for 54 min.

10——Both of them run.

Turn off air function: During Air function, press **Function** button into Air function. In this case, air mark is blinking, and then press **Enter/cancel** button to turn off this function. Air mark will subsequently disappear.

Air setting is shown as in fig.5.7:

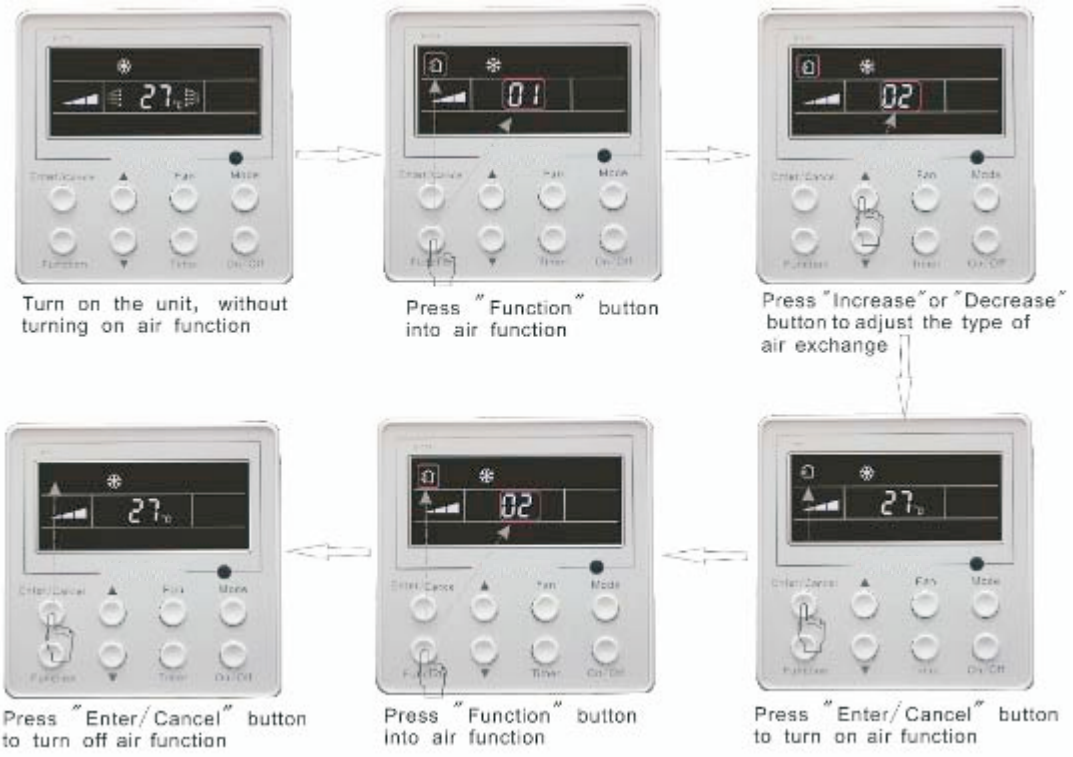


Fig.5.7 Air exchange device

Note:

In air exchange mode, press Function button or there is not any operation within 5s after the last button operation, the system will quit from air exchange setting and current energy-saving date won't be memorized.

5.8 Sleep Setting

Sleep on: Press **Function** button under on state of the unit into sleep function and then press **Enter/cancel** button to turn on sleeping function.

Sleep off: During sleep on state, press **Function** button into sleep function and then press **Enter/cancel** button to turn off this function.

Sleep setting is shown as Fig.5.8:

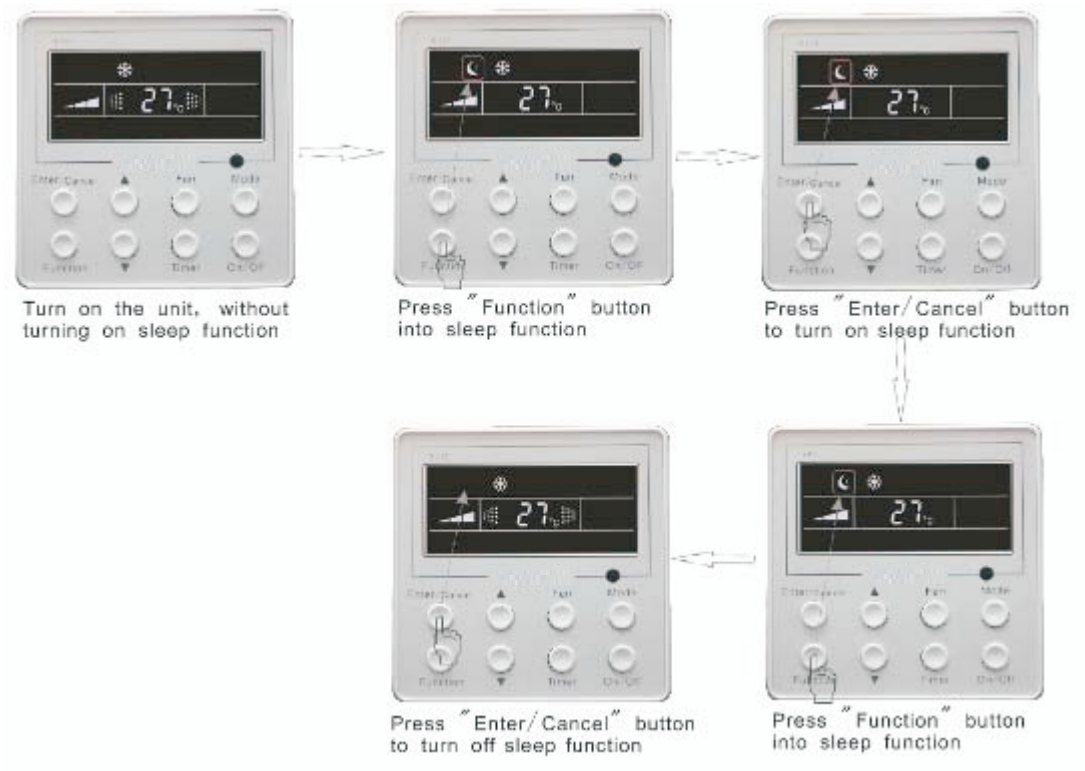


Fig.5.8 Sleep setting

Sleep off is default after power failure and then power recovery. There is not sleep function in fan and auto mode.

Note:

In cooling and dry mode, if the unit with sleep function has run for 1 hour, the preset temperature will be increased by 1℃ and 1℃ in another 1 hour. After that, the unit will run at this temperature. In heating mode, if the unit with sleep function has run for 1 hour, the preset temperature will be decreased by 1℃ and 1℃ in another 1 hour. After that, the unit will run at this temperature.

5.9 Turbo Function Setting

Turbo function: The unit at high fun speed can realize quick cooling or heating so that room temperature can quickly approach setting temperature.

In cooling or heating mode, press **Function** button till the unit enters turbo function and then press **Enter/cancel** button to turn on turbo function.

During turbo function, press **Function** button till the unit enters turbo function and then press **Enter/cancel** button to cancel turbo function.

Turbo function setting is shown in Fig5.9：

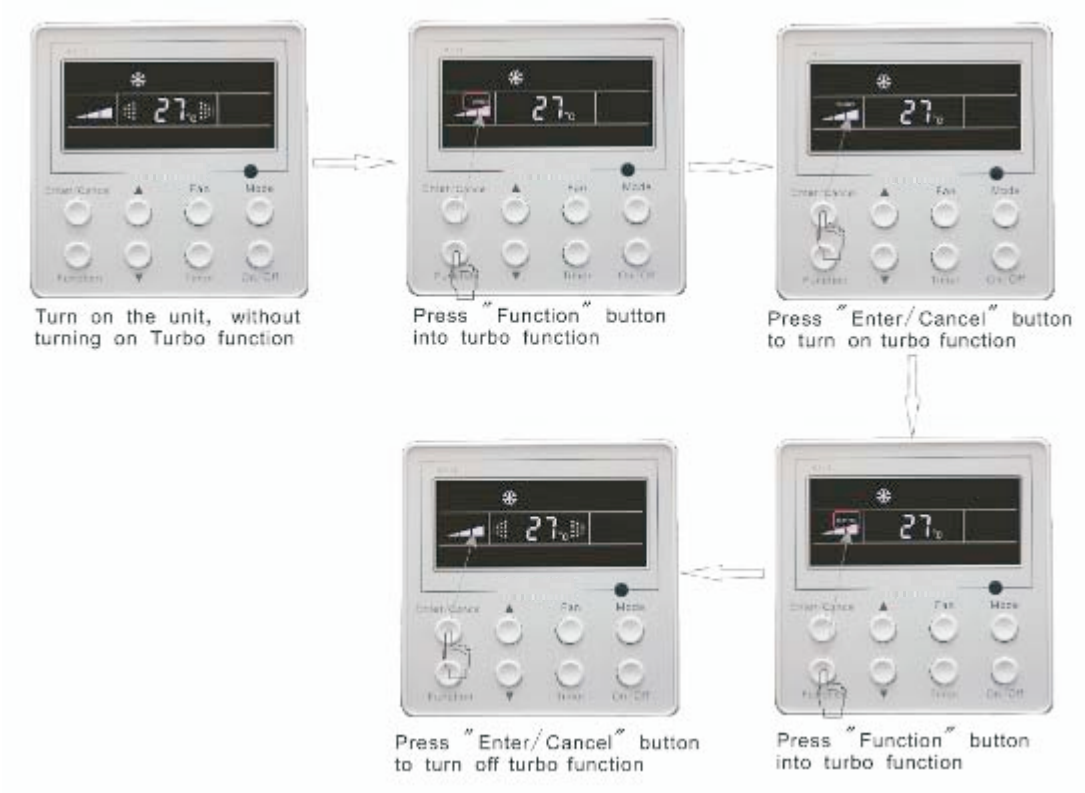


Fig.5.9 Turbo Function Setting

Note:

1. Turbo function will be turned off after power failure and then recovery. In dry, fan and auto mode, turbo function can not be set and turbo mark won't be displayed.

2. Turbo function will be automatically canceled after setting of quiet function.

5.10 Save Function Setting

Energy Saving Function: Energy saving result that the air conditioner runs in smaller temperature range is realized by setting lower limited value of setting temperature in cooing or dry mode and upper limited value in heating mode.

Energy Saving Setting for Cooling

Under on state and in cooling or dry mode of the unit, press **Function** button into energy saving function , **SAVE** blinking .Press ▲ or ▼ button to adjust lower limited value of setting temperature in cooing mode. After that press **Enter/Cancel** button to turn on energy saving function for cooling.

Energy Saving Setting for Heating

Under on state and in heating mode of the unit, press **Function** button into energy saving function, **SAVE** blinking. Press **Mode** button into energy saving function for heating and then press▲ or ▼ button to adjust upper limited value of setting temperature in heating mode. After that, press **Enter/Cancel** button to turn on energy saving function for heating.

After energy saving function is turned on, press **Function** button into energy saving function and press **Enter/cancel** to cancel this function.

The energy saving setting is shown in the fig.5.10.

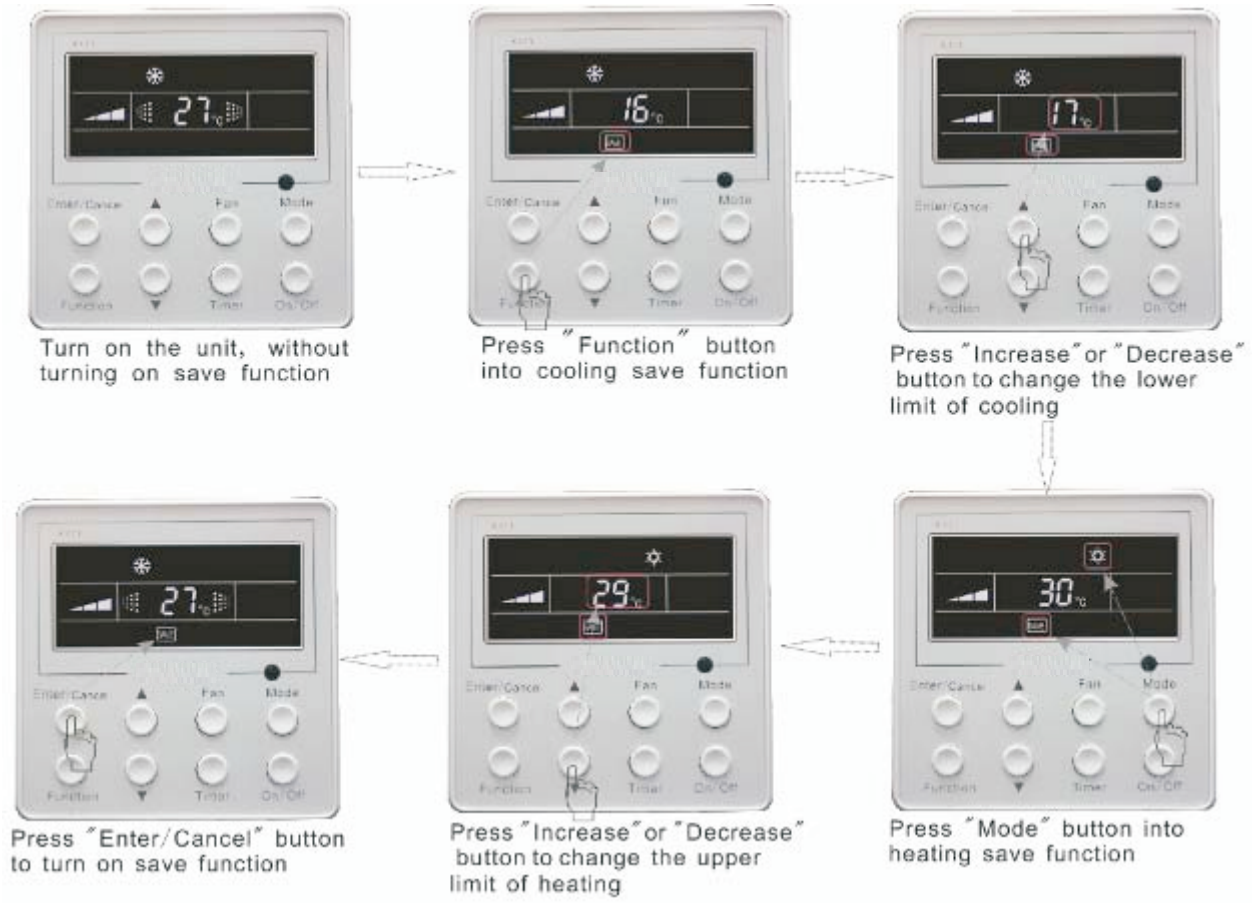


Fig.5.10 Energy Saving Setting

Note：

1. In Auto running mode with save function on, the unit will be forcibly changed to corresponding mode. After setting of save, sleep function will be canceled.

2. In save mode, if Function button is pressed or there is not any operation within 5s after the last button operation, the system will quit from save function setting and current data won't be memorized.

3. After power failure and then recovery, save function setting will be memorized.

4. The lower limited value in cooling mode is 16℃ and the upper limited value in heating mode is 30℃.

5. After save setting, if the setting temperature is out of the range in the mode, the limited value will prevail.

5.11 E-heater setting *

There is no this function for this unit

E-heater: In heating mode, E-heater is allowed to be turned on for improvement of efficiency.

If heating mode is turned on by button operation, auxiliary electric heating function will be automatically turned on.

Press **Function** button in heating mode into auxiliary electric heating function, **E-HEATER** blinking, and press **Enter/cancel** button to turn on this function. In this case, **E-HEATER** will be displayed, which means E-heater is allowed to be turned on.

If auxiliary electric heating function is on, press **Function** button to confirm or press **Enter/cancel** button to cancel. In this case, **E-HEATER** won't be displayed, which means E-heater is prohibited to be turned on.

The setting of this function is shown as Fig.5.11 below:

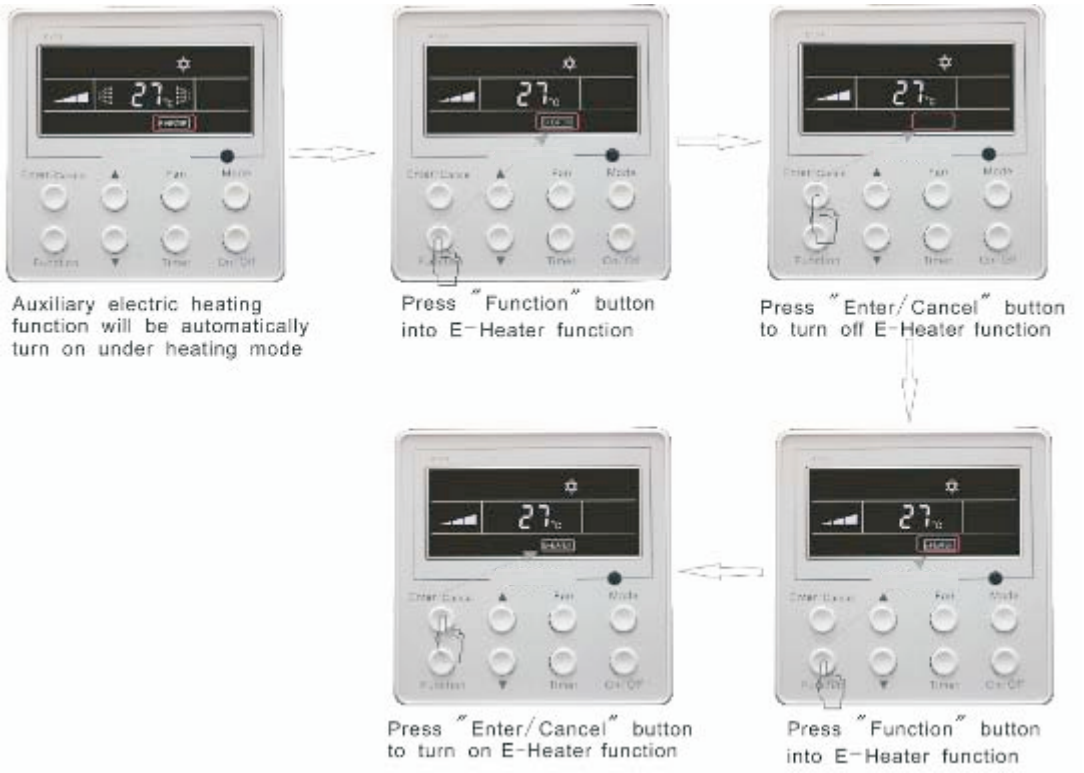


Fig. 5.11 Auxiliary Electric Heating Function Setting

Note:

1. E-heater can not be set in cooling, dry and fan mode, E-heater mark won't be displayed. The setting is shown in Fig.5.11.
2. There is not E-heater for A2 and cassette unit.

5.12 Blow Function Setting

Blow function: After the unit is turned off, water in evaporator of indoor unit will be automatically evaporated to avoid mildew.

In cooling and dry mode, press **Function** button till the unit enters dry function, **BLOW** blinking, and then press **Enter/cancel** button to turn on this function.

In blow mode, press **Function** button till the unit enters blow function and then press **Enter/cancel** button to cancel this function.

Dry function setting is shown in Fig.5.12

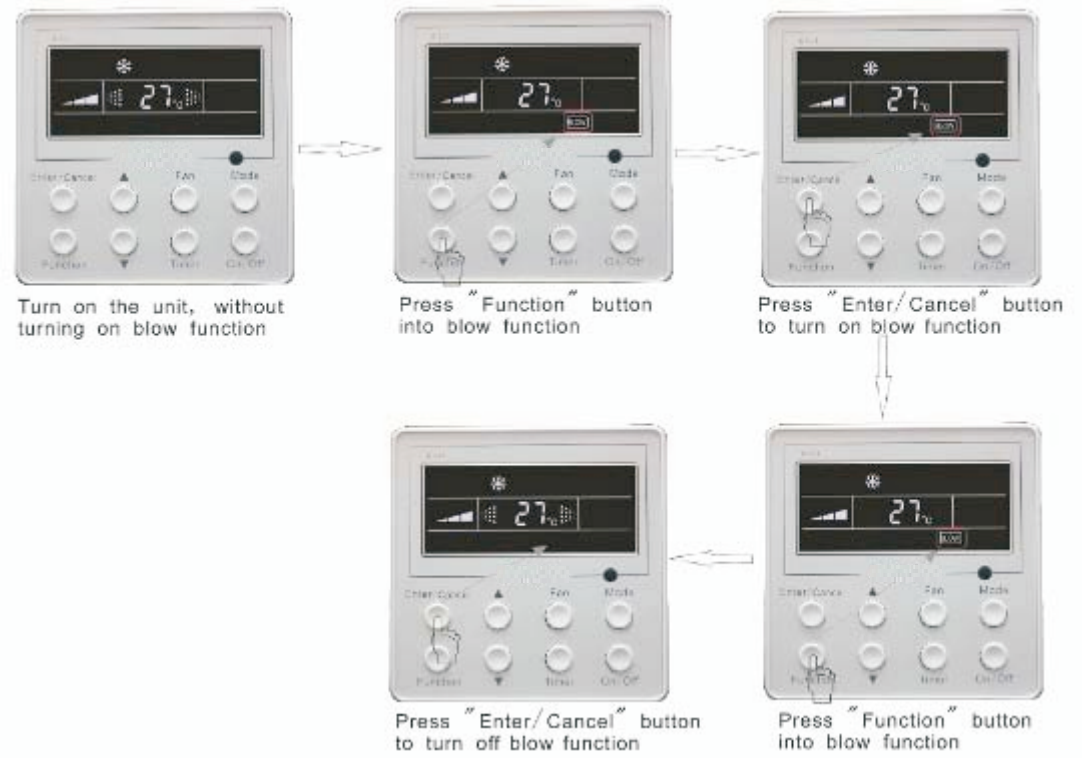


Fig.5.12 Blow function setting

Note:

1.After setting dry function, turn off the unit by pressing **On/Off** button or remote controller, indoor fan will run at low fan speed for 10 min. (**BLOW** shows).Meanwhile, if dry function is canceled indoor fan will be turned off directly.

2.There is not BLOW function in fan or heating mode.

5. 13 Quiet Function Setting

Quiet function consists of two kinds: quiet and auto quiet.

Press **Function** button till the unit enters quiet function setting state, **Quiet** or **Auto Quiet** mark blinks. In this case, press▲ or ▼ button to switch between **Quiet** and **Auto Quiet** and then press **Enter/cancel** button to turn on this function.

In quiet mode, press **Function** button till the unit enters quiet function. In this case, **Quiet** or **Auto Quiet** icon blinks and then press **Enter/cancel** button to cancel this function.

Quiet function setting is shown in Fig.5.13

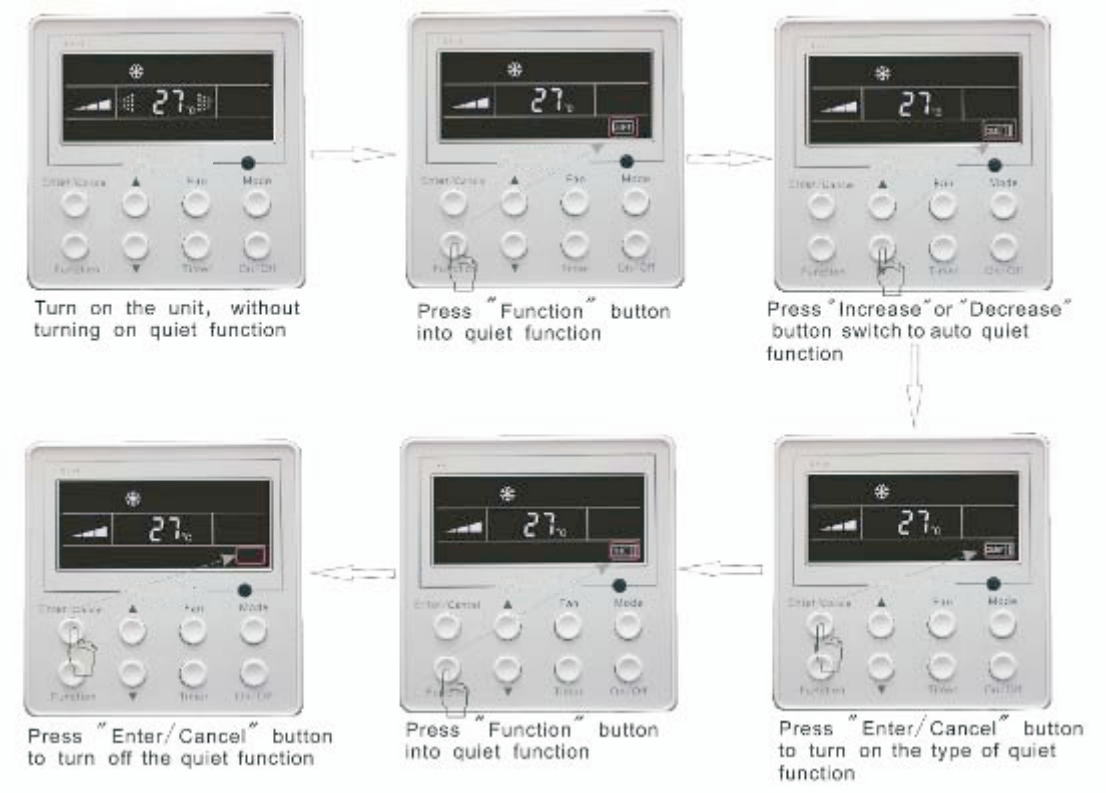


Fig.5.13 Quiet function setting

Note：

1. During quiet function, fan speed is un-adjustable.

2. When turning on auto quiet function, the unit will enter quiet running state according to temperature difference between room temperature and setting temperature. In this case, fan speed is adjustable. If temperature difference between room temperature and setting temperature ≥ 4℃, fan will keep its current speed; if 2℃≤temperature difference ≤3℃; fan speed will be reduce one grade ,but if it is at min. grade, it is un-adjustable.; if temperature difference ≤1℃, fan speed will be at min. grade

3. In auto quiet mode, fan speed can not be raised but reduced. If high fan speed is manually adjusted, auto quiet mode will quit.

4.There is not auto quiet function in fan or dry mode. Quiet off is default after power failure and then power recovery.

5 . If quite function is set, turbo function will be canceled.

5. 14 Debugging Functions

Under off state of the unit, press **Function** and **Timer** buttons continuously for 5s into debugging menu. Press **Mode** button to adjust the setting items and ▲ or ▼ button to set the actual value.

5.14.1 Ambient Temperature Sensor Setting

In debugging mode, press **Mode** button to adjust the temperature displayed location displaying 00, and press ▲ or ▼ button to adjust setting state at timer displayed location. There are 3 types for selection:

①Indoor ambient temperature is that at return air inlet (01 is displayed at timer displayed location)

②Indoor ambient temperature is that at the place of displayer (02 is displayed at timer displayed location)

③Return air inlet temperature sensor shall be selected for cooling, dry and fan modes and wired controller temperature sensor (03 is displayed at timer displayed location) shall be selected for heating and auto modes.

5.14.2 Three Grades of Speed for Indoor Fan

In debugging mode, press **Mode** button to adjust the temperature displayed location displaying 01 and press ▲ or ▼ button to adjust setting state at timer displayed location. There are 2 types for selection:

①、3 low grades (LCD displays 01)

②、3 high grades (LCD displays 02)

Three low grades indicate high, medium and low grades and 3 high grades indicate super-high, high and medium grades.

Press **Enter/Cancel** button to save the setting and quit after setting. If there is not any operation within 20s after the system responds the latest button operation in this interface, the system will quit this menu and display normal off state; meanwhile, current setting won't be saved.

5. 15 Other Functions

5.15.1 Lock Function

Upon startup of the unit without malfunction or under off state of the unit, press ▲ and ▼buttons at the same time for 5s till the wired controller enters lock state. In this case, LCD displays  . After that, repress these two buttons at the same time for 5s to quit lock state.

Under lock state, any other buttons won't give any response to the press.

5.15.2 Memory Function

Memory switchover: Under off state of the unit, press **Mode** and ▲ buttons at the same time for 5s to switch memory modes. During setting memory mode, **Memory** will be displayed. If this function is not set, the unit will be under off state after power failure and then power recovery.

Memory recovery: If memory mode has been set for wired controller, the wired controller after power failure will resume its original running state upon power recovery.

Note:

1. It will take about 5s to save all the information. Please don't cut down the power after content changed in 5 second, or It may be fail to save the content.

5.15.3 Gate-control Display Function*

If there is gate control system, the unit can run after plugging in card and stop after pulling out the

card.

If memory function is on, the unit after plugging out of card and then plugging in will run according to the memory. If the card is not plugged in (or poor plugging), the mark  will show and the unit will be turned off.

If memory function is off, the unit after plugging out the out will be turned off and the mark  will show. If re-plugging in the card, the mark will disappear and the unit enter will enter off state.

Note:

1. During long-distance monitoring, the unit on /off can not be controlled by the card, but the mark  will also show after plugging in the card.

2. The unit can not be controlled by button operation after plugging out the card.

5.15.4 Enquiry of Outdoor Ambient Temperature

Under on or off state of the unit, press **Enter/Cancel** button for 5s, outdoor ambient temperature will be displayed at temperature displaying area after a sound of click .Pressing any button, this enquiry state will quit. If there is not any operation for 20s, it will automatically quit.

Note：

1. This function will be shielded after energization of 12hr for some models of the units without outdoor ambient sensors. Please refer to Instruction for details.

2. If malfunction of outdoor ambient sensor occurs, this function will be shielded in 12hr.

5.15.5 Selection of Centigrade and Fahrenheit

Under off state of the unit, press Mode and ▼ at the same time for 5s, the displayer panel will switch between Centigrade and Fahrenheit.

6、Error Display

If there is malfunction during running of the system, LCD will display error code at temperature–displayed location. Once many malfunctions, error codes will be displayed circularly. If there are multiple systems, the system number of failed system will be displayed before the colon (not for single system).

If malfunction occurs, please turn off the unit and ask professionals for help.

As shown in Fig.6.1, it means high pressure protection of system 2 under unit on.



Fig.6.1

Note:

Only Big Wind Pipe series have multiple units.

Multi-system is only for air cooled packaged unit

Error code meaning:

Error code	Malfunction
E0	Water pump malfunction
E1	High pressure protection of compressor
E2	Indoor anti-freezing protection
E3	Low pressure protection of compressor
E4	High discharge temperature protection of compressor
E5	Compressor overload protection
E6	Communication malfunction
E9	Indoor fan motor protection
F0	Indoor unit ambient sensor malfunction at air return opening
F1	Evaporator sensor malfunction
F2	Condenser sensor malfunction
F3	Outdoor unit ambient temperature sensor mal.
F4	Discharge temperature sensor malfunction
F5	Ambient sensor malfunction on Displayer(or LED board)
EH*	Auxiliary electric heating malfunction
C5*	Wire jumper cap malfunction
C1*	Arc protection
C2*	Creepage protection

"*" There is no this function for this unit

7、Names and functions of remote control buttons

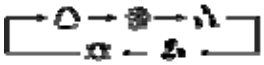
Notes: This remote control is universal .It could be used for many units. Some buttons which are not available in this unit will not be described below.



1. “ON/OFF” button

After powering the unit, when the unit is off state, press the “ON/OFF” button to start the unit. AND when the unit is on state, press the button ,it will be off.

2. “Mode” button



Press this button , the unit will be run in the mode which you want. Press this button once, the mode will be changed in a regular as AUTO –COOL –DRY –FAN – HEAT.

AUTO； COOL； DRY； FAN； HEAT

3、“+” 、“–” button

Press the “+” or “–” button to set your desired temperature. The temperature range is from 16℃ to 30℃.It is not necessary at AUTO mode. AND when you are setting the timing hours, press the “+” or “–” button once, the timing hours will increase or decrease 0.5 hour.

4、“FAN” button*

Press the “FAN” button to set fan speed. The AUTO FAN 、LOW、MID、HIGH could be selected.

(Indoor unit can only run at high fan speed mode and fan speed can’t be modified by wired controller.)

5、  button *

There is no this function for this unit. If press this key, the main unit will click, but it also runs under original status.

6、  button*

There is no this function for this unit. If press this key, the main unit will click, but it also runs under original status.

7、“SLEEP” button

Press this button to set the sleep mode. Once the sleep mode is set , the temperature will increase 1℃ after 1 hour, and still increase another 1℃ after 2 hours in the COOL mode. While in HEAT mode , the temperature will decrease 1℃ after 1 hour, and still decrease another 1℃ after 2 hours .

8、“TIMER” button

Press the button to set the timing function. When the timing function is on, press this button to cancel the function. When the timing function is off, press this button once, words Hour on(off) will appear and flicker. In this case, press +/- button to adjust time (press +/- button continuously to change timing value quickly),the setting time range is from 0.5 to 24 hr; press this key once again to fix the time, then remote controller will send out the signal immediately and hour on/off will stop flickering. If the time of that no press timer button under filcking status is above 5s, the timer setting will quit. If the timer has been set, press this button once again to quit it.

9、“TURBO” button

Set turbo on or off(the characters of turbo will appear of disappear) by pressing this key under cooling or heating mode. Once energized, the unit will be defalted to be turbo off. This function can not be set under auto, dehumidify or fan mode, and characters of turbo won’t appear.

10、“BLOW” button

Set Blow on or off (the characters of Blow will appear of disappear) by pressing this key under cooling or dehumidify mode. Once energized, the unit will be defaulted to be Blow off. Set E-Heater on or off (the characters of E-Heater will appear of disappear) by pressing this key under heat mode. Once energized, the unit will be defalted to be E-Heater off. Blow and E-Heater function can not be set under auto or fan mode, and characters of Blow won’t appear.

11、“Light” button*

There is no this function for this unit. If press this key, the main unit will click, but it also runs under original status.

12、“Temp” button*

There is no this function for this unit. If press this key, the main unit will click, but it also runs under original status.

13、“HEALTH |SAVE” button*

There is no this function for this unit. If press this key, the main unit will click, but it also runs under original status.

About AUTO RUN ：

When AUTO RUN mode is selected, the setting temperature will not be displayed on the LCD .The unit will be accordance with the room temp, automatically to select the suitable running mode and to make ambient comfortable.

About turbo function

If start this function, the unit will run at super-high speed to cool or heat quickly so that the ambient temp approachs the preset temp as soon as possible.

About LOCK：

Press “+” and “–” simultaneously to lock or unlock the keyboard. If the remote control is locked, the icon  will be displayed on the LCD, in which case, press any button , the mark will flicker for three times. If the keyboard is unlocked, the mark will disappear.

About switch between Fahrenheit and Centigrade

Under status of unit off, press MODE and – buttons simultaneously to switch °C and °F.

8、Changing batteries and notices

1、 Slightly to press the place with 

along the arrowhead direction to push the back cover of remote controller.(As show in Fig 8.1.)

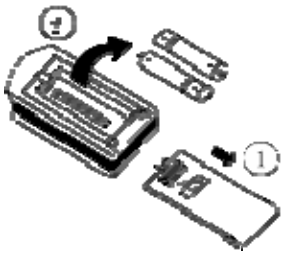


Fig 8.1

2、 Take out the old batteries ,insert two AAA alkaline cells(As show in Fig 8.2.)

3、Attach the back cover of remote control.

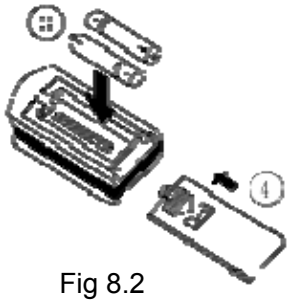


Fig 8.2

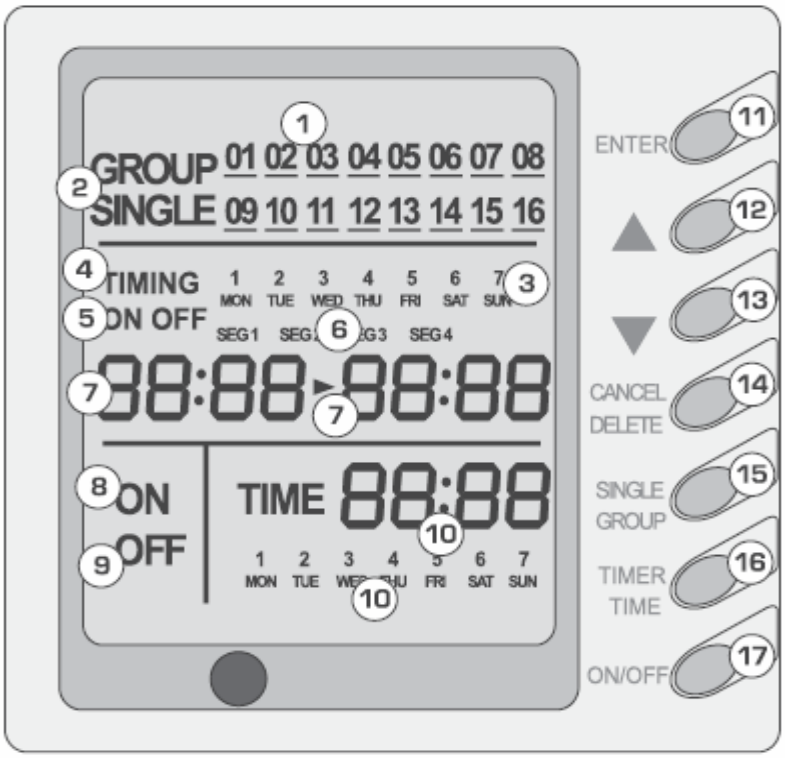
NOTE:

- When changing the batteries, do not use the old or different batteries, otherwise, it can cause the malfunction of the wireless remote control.
- If the wireless remote control will not be used for a long time, please take them out . and do not let the leakage liquid damage the wireless remote control .
- The operation should be in its receiving rang.
- It should be placed where is 1m away from the TV set or stereo sound sets.
- If the remote control cannot operate normally, please take the batteries out, and then reinsert it 30s later; if it is also abnormal, please replace the batteries.
- If the main unit needs to be remote controlled, please aim remote controller at the receiver of main unit in order to improve the receiving sensitivity of the main unit.
- When the remote controller sends out single, a make  will flicker for about 1s.The bell will ring if the main unit receives effect signal.
- **“ * ” There is no this function for this unit**

9、Weekly Timer Function

7DP - Seven days programmer (Accessory not supplied)

Centralized Control and Week Timer Functions: The centralized controller and the weekly timer are integrated in the same wire controller. The system has both the centralized control and the week timing functions. Up to 16 sets of units can be controlled simultaneously by the centralized controller (weekly timer). The weekly timer has the function of invalidating the lower unit. The weekly timing function is able to realized four timing ON/OFF periods for any unit everyday, so as to achieve fully automatic operation. This WEEKLY TIMER adopts 485 modes to communicate with manual control of every duct type unit, and it can control up to 16 units. Adopting2-core twisted-pair wire, the longest communication distance of this TIMER is 1200m. After connected to power, the WEEKLY TIMER can display all connected units (sequence of unit is determined by code switch of manual control of every duct type unit). On and off of every duct type unit can be done through the Timer On / Off of this WEEKLY TIMER, and the button shield operation of manual control can be done through shield setting on WEEKLY TIMER. Mode selection and temperature adjustment and other operations are done through the manual control at every unit.



Composition of programmer wall week			
1	Unit dispaly	9	Unit off display
2	Single/group display	10	Clock display
3	Timer week display	11	Confirm button
4	Timer display	12	Increase button
5	Timer state display	13	Decrease button
6	Timer time period display	14	Cacel/delete button
7	Timer ON/OFF time display	15	Single/group button
8	Unit on display	16	Timer/time button
		17	ON/OFF button

Note:

1． For upper unit checks 16 lower units consecutively, there will be no more than 16 seconds delay when setting works till unit responds.

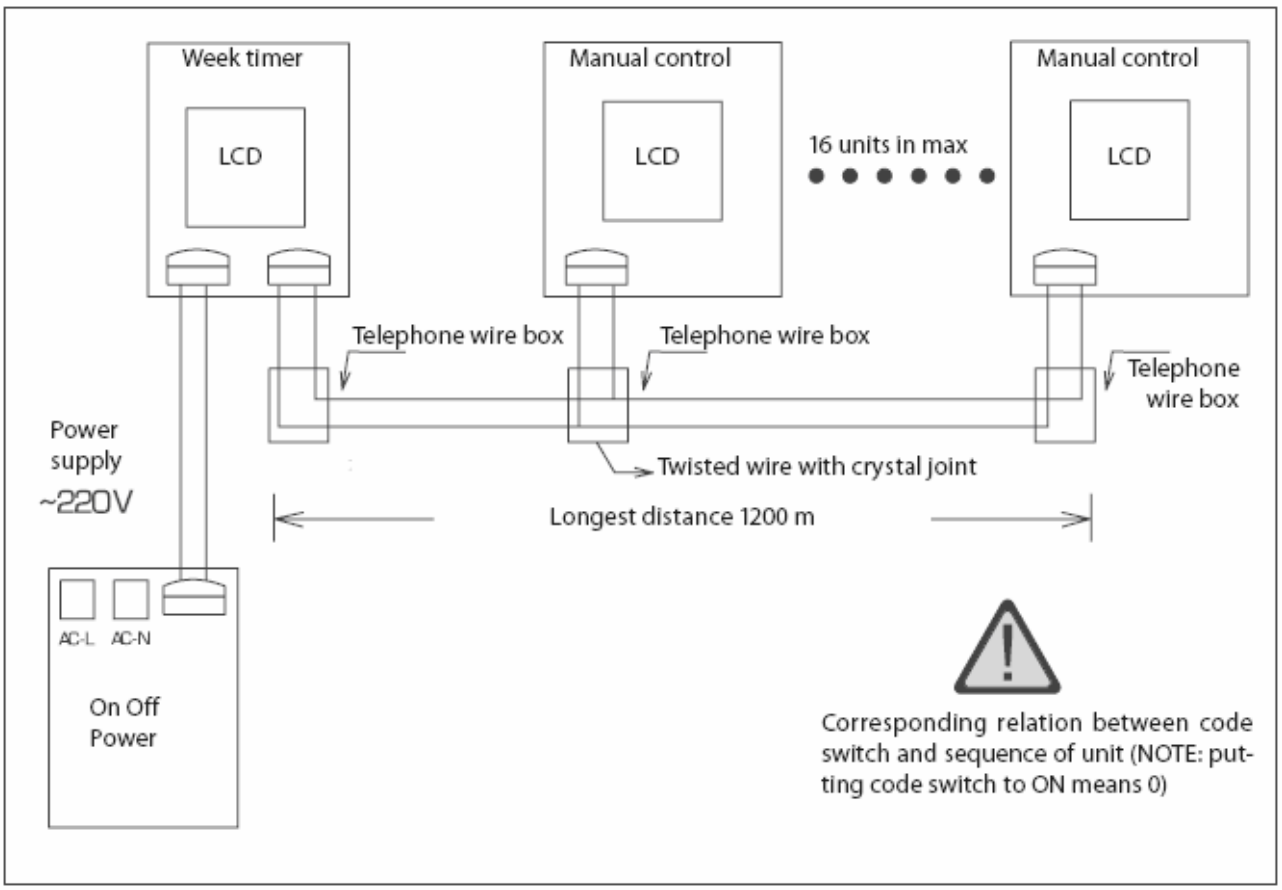
2． Please let us know your requirement before your placing the order, for this WEEKLY TIMER will only be prepared when customer orders(communication joint with WEEKLY TIMER on manual control had been prepared).

1. Press ▲ or ▼ to select the unit that needed to be control. It is available to control several units by Group Control (1~16), or control single unit by Single Control.

2. When selected a certain or several units by Single Control or Group Control, Timer setting and On/off setting can be set. Timer setting can set 4 on/off times in a day in one week; and on/off setting can be done by pressing on/off button.

3. Connection between WEEKLY TIMER and manual control is shown as following:

4、please check the manual to read how to set the address of manual.



10、Installation instruction

The installation must accord with local regulation, and must be carried out by the professionals. Never carry out the work by yourself without the help of professionals. And don't supply power, until all the work is finished according to the user's manual.

10.1 Selection proper installation location

1). Selection the proper location for indoor unit

- ✧ Avoid the direct sunshine.
- ✧ Make sure the suspension bracket is strong enough to withstand the unit's weight.
- ✧ Select a place for easily connection of the drain hose.
- ✧ The inlet and outlet ports should not be obstructed so that the indoor air circulates well.
- ✧ Make sure the convenient connect of the connection pipes.
- ✧ Selection a location that is far away from the combustible or explosive material and gas.
- ✧ Selection a location that is far away from the cankerous material, frog, dusk or moist.

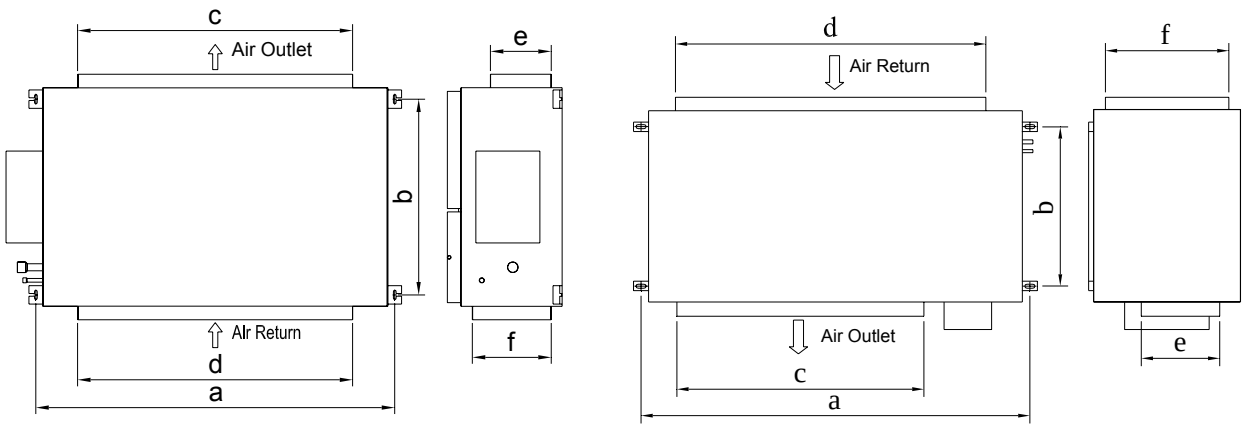
2) Selection the proper location for outdoor unit

- ✧ Outdoor unit should be installed in a steady and stable place.
- ✧ To reduce the length of the refrigerant pipe and bend number, make sure the indoor unit and outdoor unit be close to each other.
- ✧ Ensure the operation noise do not disturb neighbors and passerby.
- ✧ Do not install the unit where it will be exposed to direct sunlight or other radiation heat source, or the awning or a rainproof cloth should be utilized.
- ✧ The inlet and outlet port should not be blocked.
- ✧ Make sure the well air circulation.
- ✧ Selection a location that is far away from combustible or explosive material, dust, fog or moist.

Don't connect any air leading duct to the outdoor unit, at neither the air inlet nor the air outlet. The outdoor unit will drop condensate while running at heat mode. If the temp is minus, it will form ice. Don't let the rain proof interfere the ventilation of outdoor unit.

10.2 Install the indoor unit

1). The dimensions of installation hole and the intake/outlet port are shown in Fig. 19 and Table 1.



a. 20KW、25KW 、30KW **b. 40kW**

Fig. 19 Indoor unit installation position and dimension

Table 1 Outlines and dimension of the unit **Unit: mm**

Model	a	b	c	d	e	f
FSL-1100B-H-3F	1560	910	1194	1194	292	342

2).Main body of the indoor unit The indoor unit should be installed horizontally and the demand of installation space is shown in Fig. 20. To install an indoor unit needs 4 hanging rods, and each hanging rod should at least withstand four times of the unit's weight.

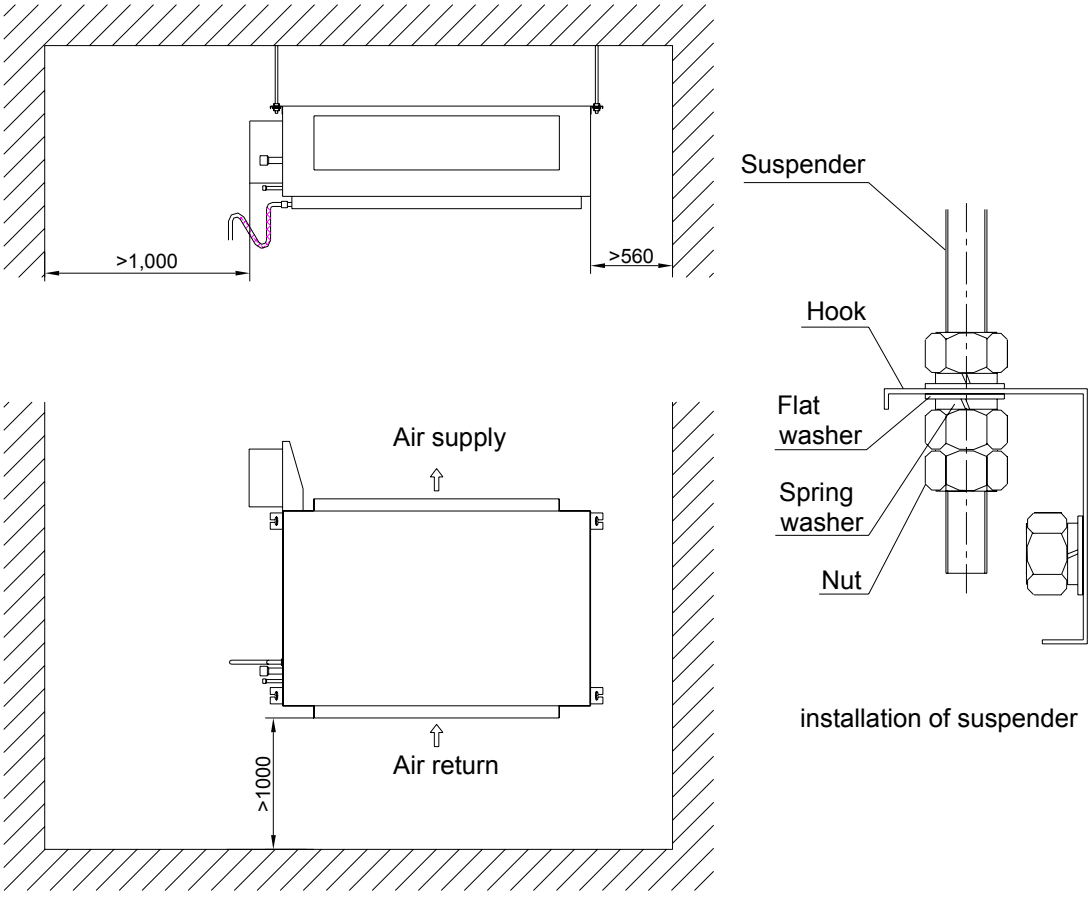


Fig.20 Schematic for the indoor unit

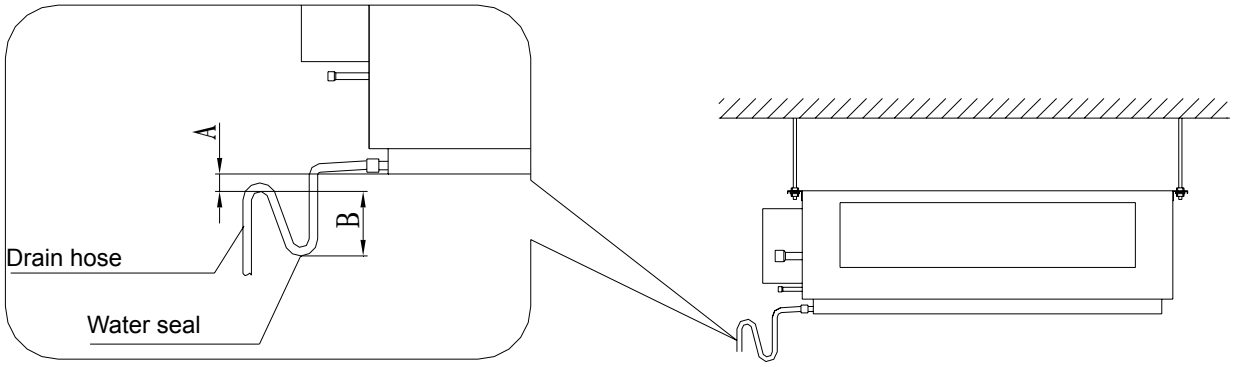
3). Drain hose

For easy drainage of the condensation water, the should be installed with a downward gradient. To avoid the condensation, the connection pipe joint should be insulated with thermal insulation material. A water seal should be employed as shown in Fig. 19 and the height of the water seal could be determined by the pressure of the drain hose.

Drain hose is in negative pressure state: A = B≥P/10+20 (mm)

Drain hose is in positive pressure state: A≥30mm，B≥P/10+20 (mm)

Note: P is the absolute pressure of the drain hose position, Pa



4). Refrigerant pipe insulation layer

To avoid condensation of drew and water leakage, gas pipe and liquid pipe of refrigerant should be insulated with thermal insulation material and adhesive tape.

5). Install the Electrical Box. (Be Suit For 25KW~40KW)

In order to ease the maintaining work, we recommend to get of the electrical box part of the indoor unit to refix it at the air outlet part. Please see following Fig 21.

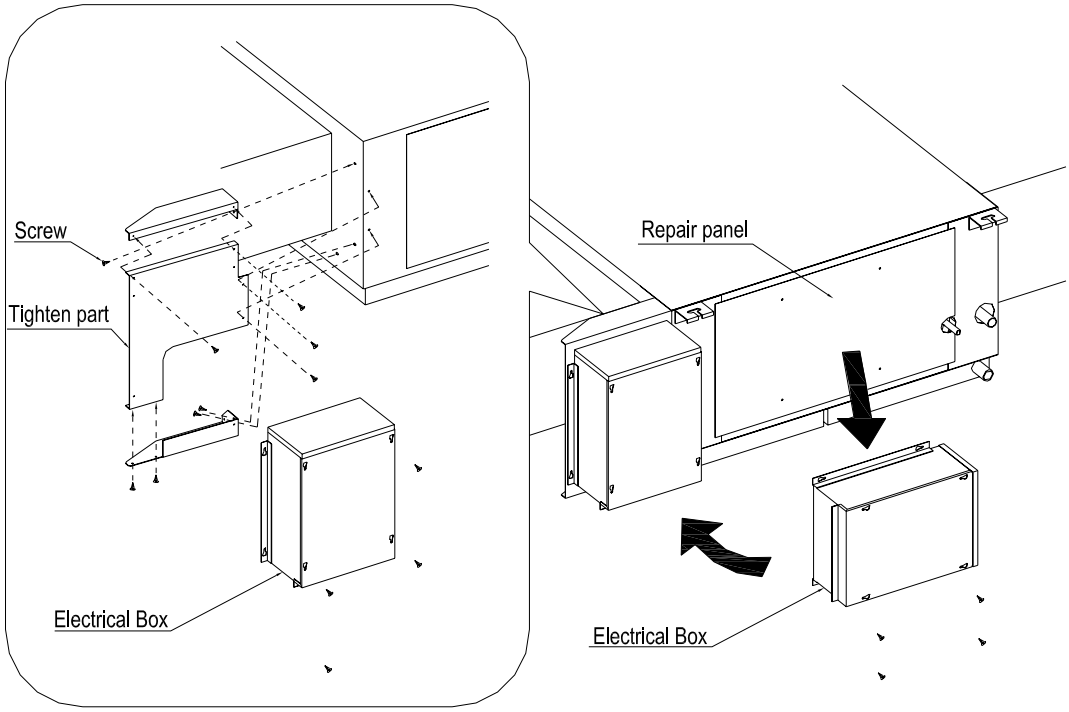


Fig. 21 Schematic for the Electrical Box part

6). Install the wired remote controller

- A pit or a hole in the suitable position of the wall should be reserved for the connection signal cables.
- The connection wire between indoor unit and controller can be laid in the pit with 1# PVC pipe for direct installation (Figure 22). For concealed installation, 1# PVC can also be utilized (Figure 23).
- Both Cable of direct installation and the concealed one, please drill two horizontal hole on the wall and insert two wooden plug. Then fix the soleplate on the wall and insert the signal wire pin into the plug as showed in Figure 24, finally fix the controller to the wall..

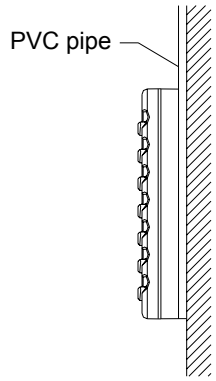


Fig. 22 Cable of direct installation

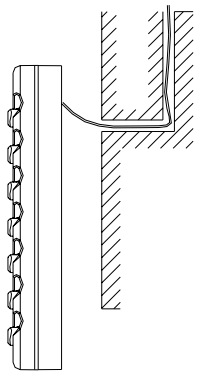


Fig.23 Cable of concealed installation

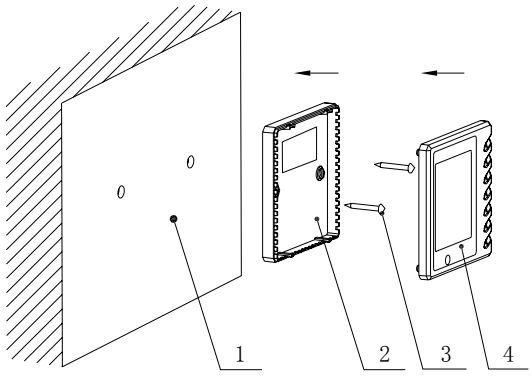


Fig.24 Schematic

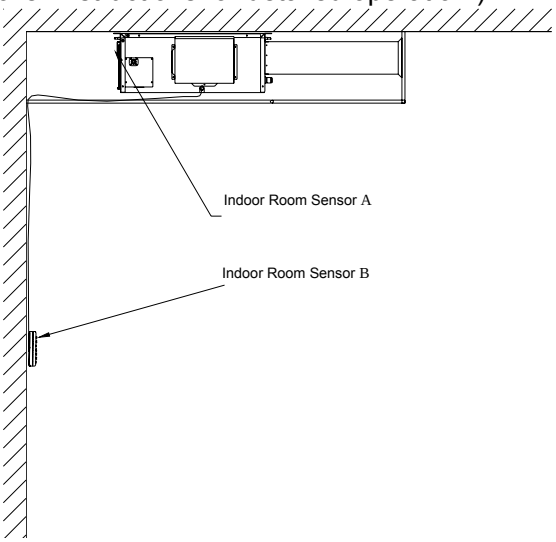
Serial	Name
1	Wall
2	Soleplate
3	Screw M4X10
4	Controller Panel

7). Connection of the signal wire

- Open the electrical box;
- Plug the wire through the PVC pipe;
- Plug the wire onto the four-nail sea;
- Tighten the wire;
- The max length between controller and the PCB board is 20m.

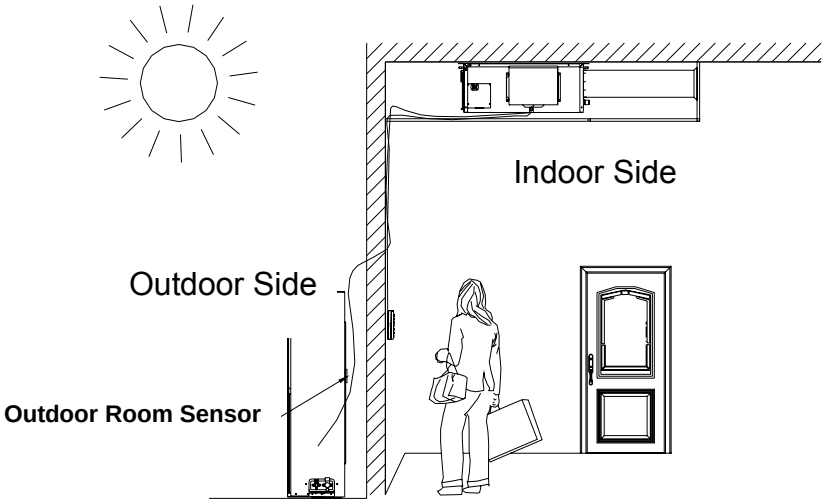
8).Setting of Double Indoor Room Sensors

This series of ducted air-conditioning unit has two indoor room sensors. One is located at the air intake of the indoor unit and the other one is located inside the wire controller.
User can select one from the two indoor room sensors on the basis of the engineering requirement. (Refer to the section of wire controller instructions for detailed operation.)



9).Checking of Outdoor Ambient Temperature

The outdoor ambient temperature can be checked on the wire controller for the convenience of users before going out. (Refer to the section of wire controller instructions for detailed operation.)



10）.Information for fuse

	Fuse	Model	code
FSL-1100B-H-3F	Indoor	T5AL 250V	46010013
FSOL-1100B-3F	Outdoor	T3.15AL 250V	46010014

11). Adjust the tightness of the belt of the fan unit (Be Suit For 25KW~40KW)

The rotation of the fan is achieved by the transmission of the belt. The velocity and stability of the fan is associated with the tightness of the belt and the tightness should be adjusted after a period of time. For a new belt, the tightness should be adjusted for at least twice within 24 hours.

After one week running, the tightness of the belt should be adjusted again, we should routinely check it every 1-2 months; also ensure the test results complying with Table 2.

The adjustment of the tightness of the belt is shown in Fig. 25. Loosen screws fixing motor on the base, move motor along the direction of arrow as shown in the picture, then fix the screw again.

The tightness level of belt is tested by tensiometer as shown in Fig. 26, when △ reaches the deviation length(Deviation=The total length beit/64) ,read the value on the meter, the value should be in the category specified in Table 2.

Table.2 Tension range of the belt

Belt Section	Diameter of the small wheel (mm)	Tension (N)	
		Min	Max
SPA	80~132	25	35
SPZ	56~95	13	20
	100~140	20	25

Mounting plate for motor

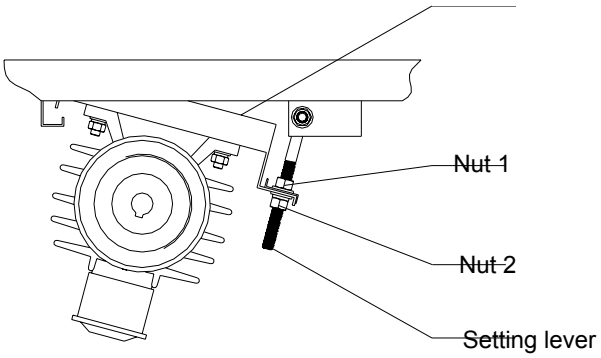


Fig. 25 Adjust the tightness of the belt

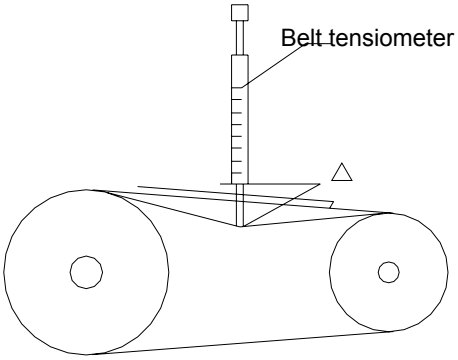


Fig. 26 Utilization of the belt tensiometer

10.3 Install the outdoor unit

1). Outline and dimension of the outdoor unit

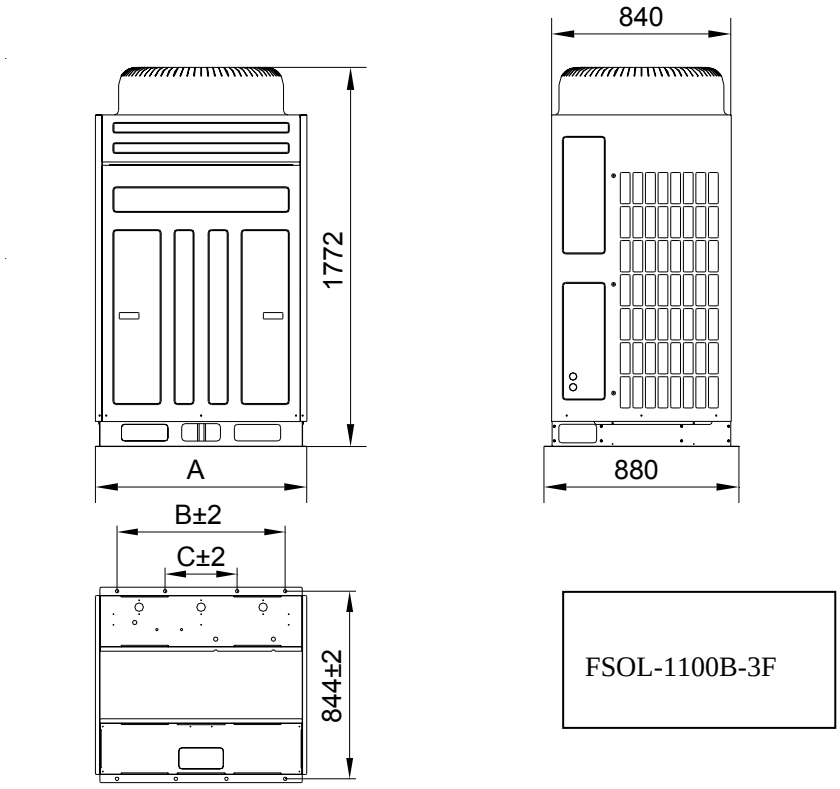
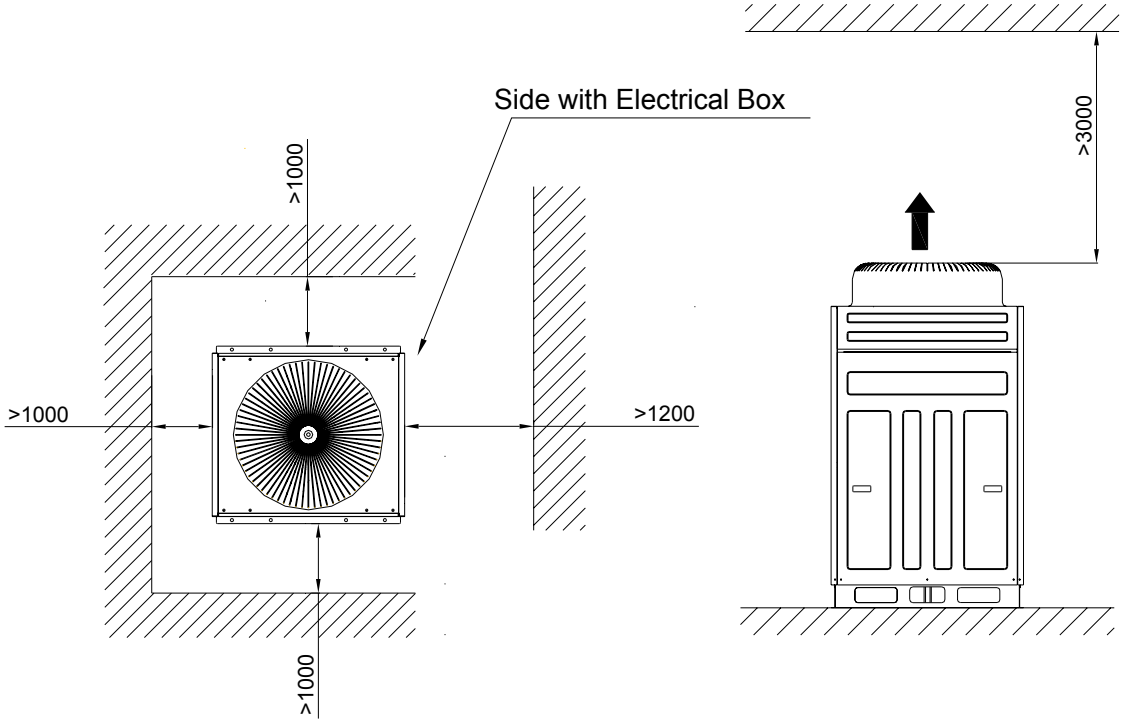


Fig 27 Schematic of the Outdoor unit

Table.3 Outlines and dimension of the unit **Unit: mm**

Model	A	B	C
FG(R)30/ BNa -M (O)	990	787	337
FG(R)40/ BNa -M(O)	1290	1160	850

2). Installation position



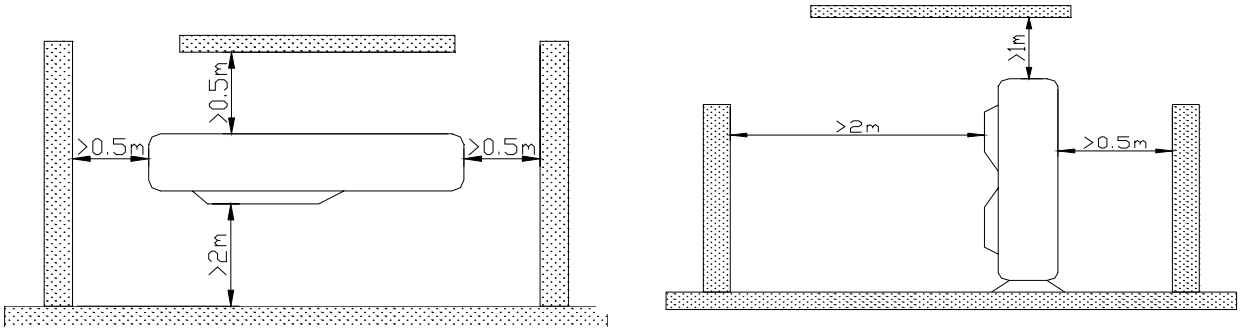


Fig 29 Schematic for the installation of the outdoor unit

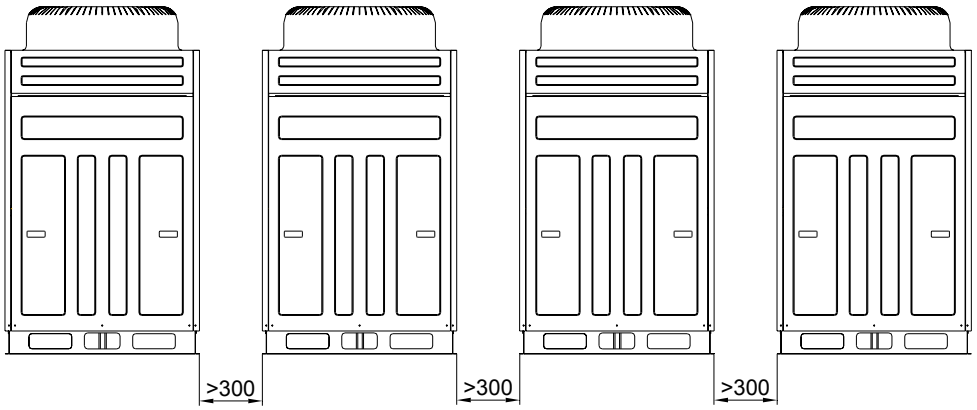


Fig 30 Schematic for the installation of the outdoor unit

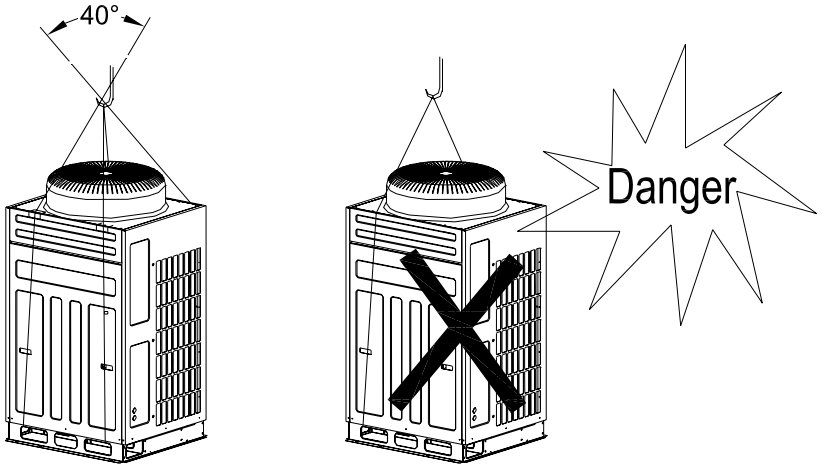


Fig 31 Crane way schematic

When removing the outdoor unit, two ropes are needed to hang the unit along the four ways. In order to avoid the excursion, the angle between the ropes should be less than 40 degree.

Please use M12 to tight the support fundus.

3). Refrigerant pipe connection

Note:Do not loosen the cap of the pipes when connecting the pipes between the indoor unit and the outdoor unit. Connecting the pipes as soon as possible after loosening the cap of the pipes to avoid the entering of water and dusk. A metal pipe should be utilized if a pipe should be installed through a wall.

- The connection of the pipes should confirm to the following principles:
- Make sure to lessen the length of connecting pipe, the height difference between the indoor and outdoor unit,

and the number of bends, and enlarge the diameter of bends.

The permitted maximum value of each case:

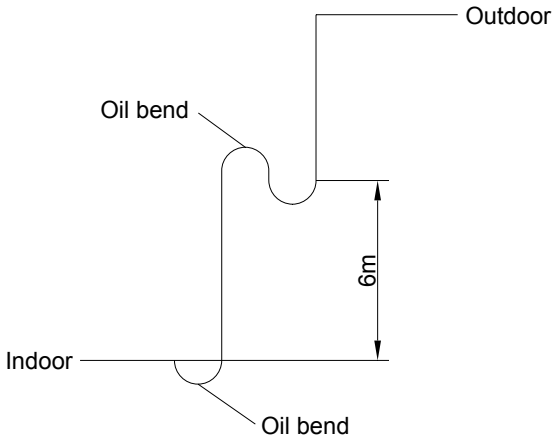
Height difference between the indoor and outdoor unit	＜30M
90^0 Number of bends	＜12
Length of connecting pipes	＜50M

- The pipe meld type could be employed for the connection of the pipes between the indoor and outdoor units.
- The pipe joint should be tightly connected when a pipe joint is employed between two pipes. It is better to use only one connecting pipe if the distance is not far.
- The pipes should not be shriveled when the pipes are connecting. The bend diameter should be longer than 200 millimeter. The connecting pipes should not be extended or curved frequently and the curving process should not be larger than 3 times in the same bending position.

4).Vacuum evacuating, leakage testing and refrigerant charging

- The system is charged with nitrogen gas from the low-pressure valve until the pipe pressure increasing to 1Mpa, and the leakage is examined at the connecting or welding position with soap water. The air is evacuated in the pipe from the check valve with a vacuum pump if no leakage exists, then loosens the cores of the liquid valve and gas valve and clears the soap water with dry cloth.
- If the vacuum pumps and high-pressure nitrogen are not available, we can operate as following:
  - Remove the cores of the liquid valve and gas valve and loosen the cores of check valve on the gas valve and the gas will exhaust. Keep exhausting for 15 seconds, tightening the check valve as refrigerant gas coming out.
  - Loosen the liquid valve and gas valve.
  - Tighten the bonnet of the valve, and examine the air leakage at the connecting position with soap water or gas leakage detector, then clear the soap water with dry cloth.
- Wrap the flare nut with insulation material to avoid the condensation dropping after finishing the preceding procedure.

The refrigerant in the conditioner unit is enough for the connecting pipes of 7.5 meters, if the pipe is longer than 7.5 meters, additional supplement refrigerant should be supplied. The maximum pipe length is 50 meters. When the height difference between the indoor unit and outdoor unit is larger than 10 meters, an oil bend should be employed for every 6 meters.



Additional supplement refrigerant as per the extended connection pipe:

Item	Size of Fitting Pipe (mm)	Max. Pipe Length (m)	Max. Height Difference between	Amount of Additional Refrigerant to be

Model	Gas Pipe	Liquid Pipe		Indoor Unit and Outdoor Unit（m）	Filled (For Extra Length of Pipe)（Standard Pipe Length 7.5m)
FSOL-1100B-3F,FSL-1100B-H-3F	9/8	1/2	50	30	110g/m

10.4 Electric wiring

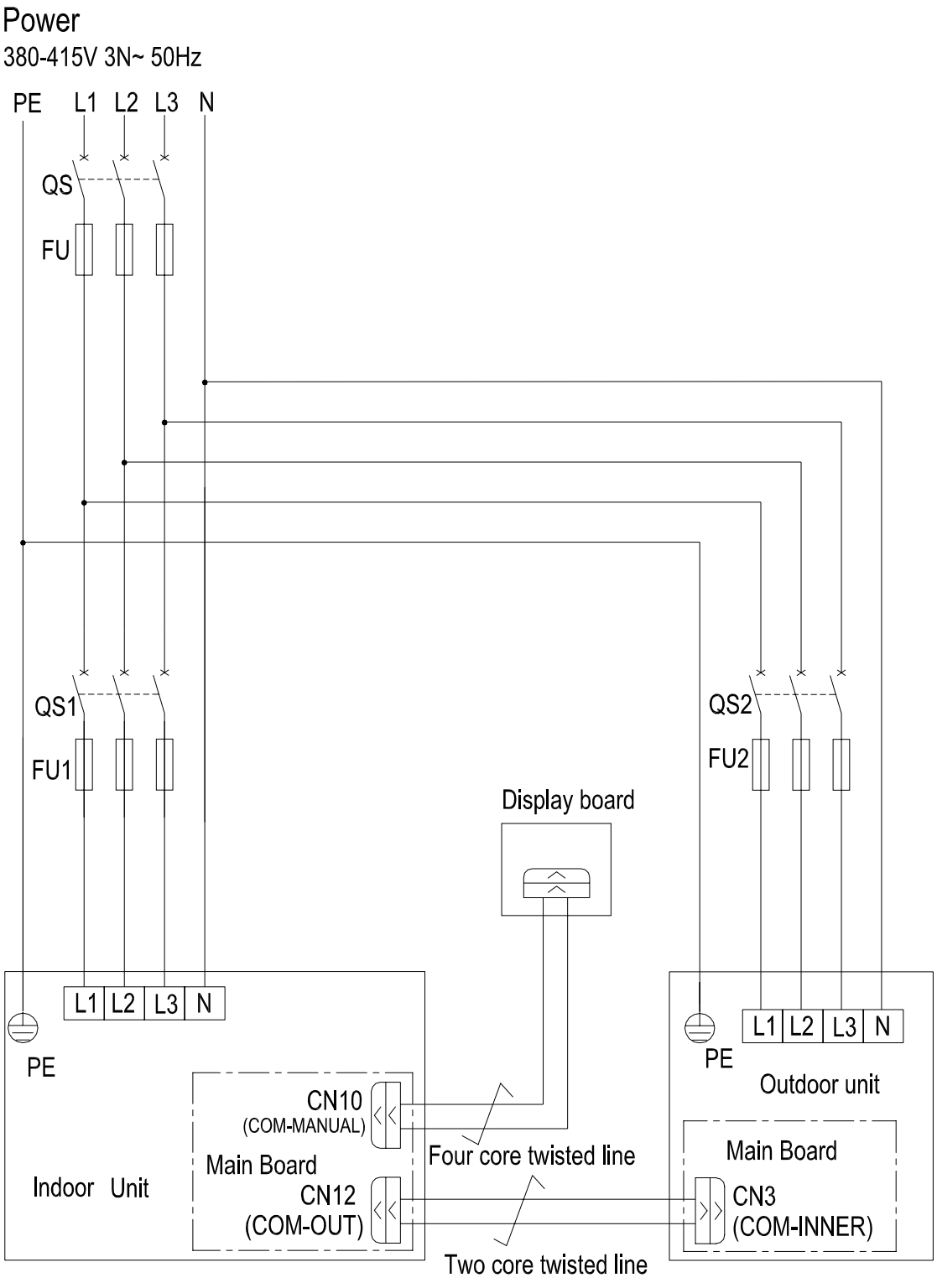
- ✧ All of the supplied components, material, and electric operation should be accorded with the local principles.
- ✧ The power supply should adopt the rated voltage and special circuit for the ducted air-conditioning unit.
- ✧ About the electric working, please refer to the “circuit diagram” adhering to the unit.
- ✧ All the connection of the circuit should be carried out by the qualified electrician.
- ✧ A circuit breaker that can cut all the power supply of the system should be installed. Wiring diagram of the ducted air-conditioning unit is shown in Fig. 32.
- ✧ The units should be well earthing to the ground by professionals.
- ✧ Install a central switch which can cut all the power switch and air switch of the system.
- ✧ The air switch should have hot and magnetic auto-turn-off function to protect the system from overloading or short power.
- ✧ Please accord to electrical diagram on the unit when connecting the wires.

1. Open indoor electric box and outdoor electric box respectively and put the wires cross the electric boxes. Please choose the specification of the power cables according to the power capacity and the installation conditions of the unit. Fix the wires with wire clamp and assemble the electric cover after confirmation.
2. The wiring schematic of the outdoor unit, please refer to Fig 32, while the power cord standard and air-switch type, please refer to recommending table 4.

Table.4 Power cord standard and air switch recommending table

Model	Power Supply	Air Switch (A)	Earthing section(mm^2)	Permit Min section (mm^2)
FSL-1100B-H-3F	380-415V 3N~ 50Hz	10	H05VV-F 1.5	H05VV-F 1.5
FSOL-1100B-3F	380-415V 3N~ 50Hz	40	H05RN-F 10.0	H05RN-F 10.0

Wiring schematic for outside the unit



*** The power cord must be copper inside, while the working temp. can not be over its standard one.**

*** If the total length of the power cord is over 15m, please increase the size by certain degree.**

*** Please confirm the other wire according to the actual need.**

11、Trial run and installation checking

11.1. Trial run

1). Preparation for trial run

The power supply should be turned on only after finishing all the installation.

All the control wires and cables are connected correctly and safely.

Open the cut-off valves in the gas and liquid pipes.

All the objects like screws and wires etc that remained in the machine should be cleared after installation.

2).Trial run

Switch on power supply and press the ON/OFF button to start operation.

Select FAN mode to check if the phases of the indoor motor are correct.

Select COOL, HEAT and FAN mode and check if the machine operates normally.

11.2. Checking items after installation

Item Possible defects Checking	Has it been fixed firmly?
How is the installation?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient refrigerating capacity.
Is heat insulation sufficient?	It may cause condensation and dripping.
Does the unit drain well?	It may cause condensation and dripping.
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunction or damage the part.
Is the electric wiring and piping connection installed correctly and securely?	It may cause electric malfunction or damage the part.
Has the unit been connected to a secure earth connection?	It may cause electrical leakage.
Is the power cord specified?	It may cause electric malfunction or damage the part.
Has the inlet and outlet been covered?	Insufficient refrigerating capacity.
Has the length of connection pipes and refrigerant capacity been recorded?	The refrigerant capacity is not accurate.

11.3. Checking items after installation

Malfunction	Possible cause	Solution
Ducted air conditioning unit can not start-up	1. The power supply does not connect or improper phase sequence. 2.The electricity leakage switch is switching off for the leakage of electricity from the air conditioner units 3. The voltage is too low 4. The operating button is closed 5.The control system is in malfunction	1. Connect the power supply or change two random phase 2. Contact the service center of FISHER 3. Contact the dealer 4. Press ON/OFF button again 5. Contact the service center of FISHER
Ducted air	Air outlet port or intake port of indoor unit or	1. Move the obstacles

conditioning unit stops shortly after start-up	outdoor unit is blocked The abnormity of control system The operation of pressure switch Indoor room temperature is lower than 18 Tube sensor does not connect properly Tube sensor is broken	2. Contact the service center of FISHER 3. Contact the service center of FISHER 4. Check if it's necessary to operate the air conditioner 5. Connect it properly 6. Contact the service center of FISHER
Heating is not sufficient	1. Air filter is blocked 2. Air outlet port or intake port of indoor unit or outdoor unit is blocked 3. Doors or windows are open 4. Refrigerant leakage 5. The outdoor temperature is lower than –5 6. Abnormal operation of the control system	1. Clean air filter 2. Move the obstacles 3. Close windows and doors 4. Contact the service center of FISHER 5.The performance of the unit is affected 6. Contact the service center of FISHER
Cooling is not sufficient	1. Air filter is dirty 2. Air outlet port or intake port of indoor unit or outdoor unit is blocked 3. Too many persons or a heat source in the room 4. Doors or windows are open 5. Too high temperature setting 6. Refrigerant leakage 7. Poor performance of room sensor	1. Clean air filter 2. Move the obstacles 3. If possible, clear heat sources 4. Close windows and doors 5. Lower set temp. 6. Contact the service center of FISHER 7. Change room sensor

Note: Check the previous items, please contact the nearest service center of FISHER and depict the air conditioner model and its symptom if the problem cannot be solved.

12、Care and Maintenance

To ptimize the life of the air-conditioning unit, check and maintain the unit regularly with specialized person.

1) Air filter Air filter is made by washable nylon, if you want to clean it, you can put it on a harder plate, then tap it gently to move bigger particles. If necessary, you can wash it in water with mild detergent, then dry it naturally.
2) Outdoor heat exchanger Outdoor heat exchanger must be cleaned regularly, at least once every two months. You can clean the surface with vacuum cleaner or nylon brush, please do not wash it with water.
3) Belt The indoor units are driven by belt, you should check the tightness of the belt after operating for a period of time.
4) Drainage pipe Check the drainage pipe regularly so as to confirm the fluency flow of condensate.
5) Running cautions of machine as operating season coming

- Check if air intake and outlet port is blocked.
- Check if the earth connection of the machine is reliable.
- Check if the air filter is installed properly.
- After a long period of stop, we should switch on the power supply for 8 hours to preheat the crankcase of compressor before operating the machine.

6) Maintenance at the end of operating seasons

- Clean the air filter, indoor unit body and outdoor unit body.
- Cut off power supply.
- Clean the dust on outdoor unit.

7) Components replacement The components are available at local service center of FISHER or FISHER dealer.

Attention: When you perform leakage test, please do not charge oxygen or acetylene into the system, use nitrogen gas or the refrigerant instead. Service If there is any problem with FISHER ducted air-conditioning units, please contact the local service center or FISHER .

13、Appendix

Air conditioner nominal working condition and working range:

Test condition	Indoor side		Outdoor side	
	DB(℃)	WB(℃)	DB(℃)	WB(℃)
Nominal cooling	27	19	35	24
Nominal heating	20	--	7	6
Rated cooling	32	23	43	26
Min. temp. for cooling	21	15	18(-15)	--
Rated heating	27	--	24	18
Min. temp. for heating	20	--	-7	-8

Note:

1. The design of this unit conforms to the requirements of EN14511 standard.
2. The air volume is measured at the relevant standard external static pressure.
3. Cooling (heating) capacity stated above is measured under nominal working conditions corresponding to standard external static pressure. The parameters are subject to change with the improvement of products, in which case the values on nameplate shall prevail.
4. In this table, the outdoor side 18(-15) DB (℃) temperature of low-ambient cooling include two values, the one in the bracket is the working condition of the appliance with function of low-ambient cooling . 18 is the working condition for the unit without low ambient cooling fuction. -15 is the working condition for the unit with low ambient cooling function.



WARNING!

- This appliance is not intended for use by persons (including children) with reduced physical sensory or capabilities, or leak of experience and knowledge, unless they have been given supervision on instruction concerning use of appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.



DISPOSAL： Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.

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